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September 21, 1959

RAILWAY AGE *weekly*

PLANNING FOR 1960

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- Labor
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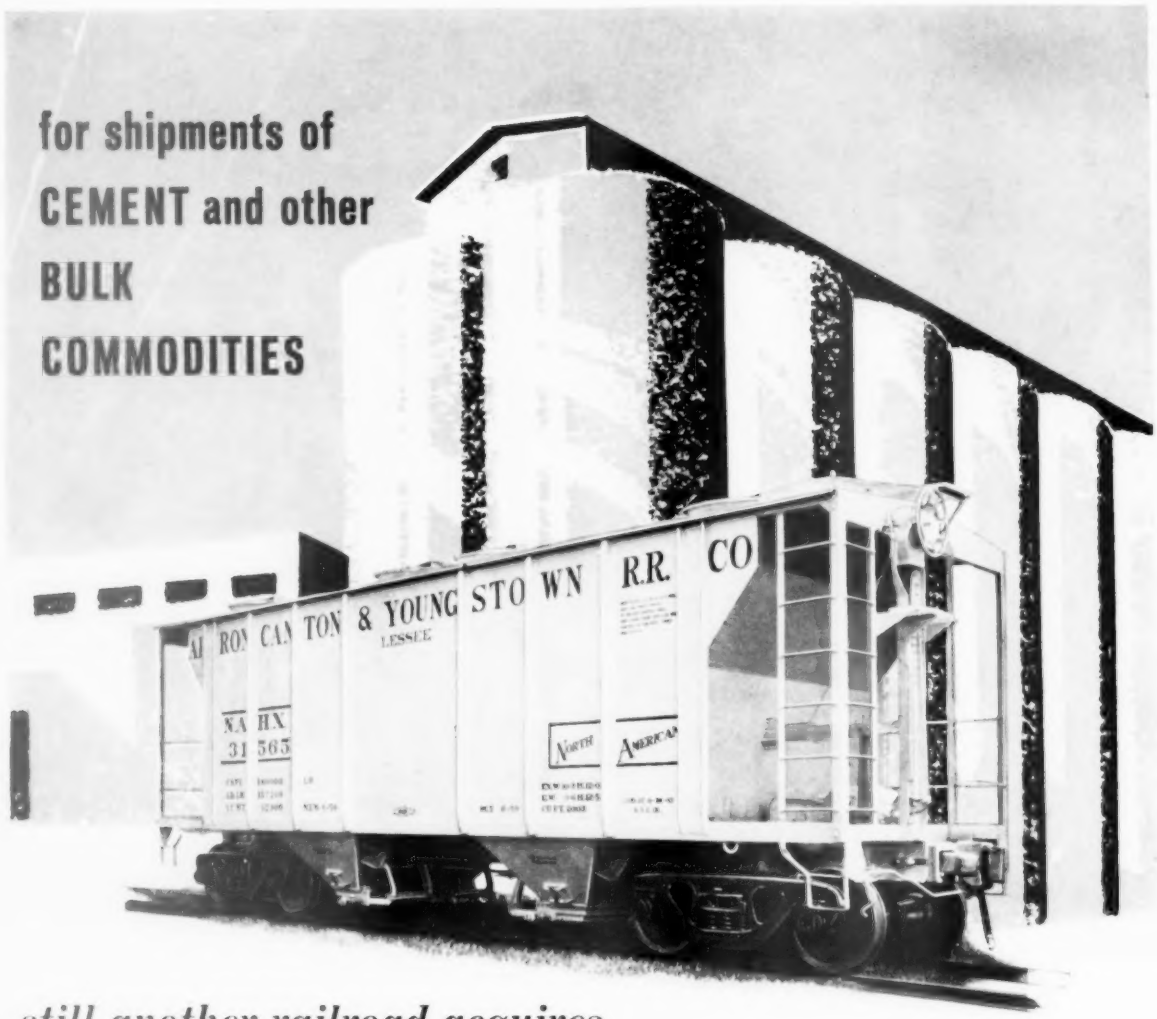

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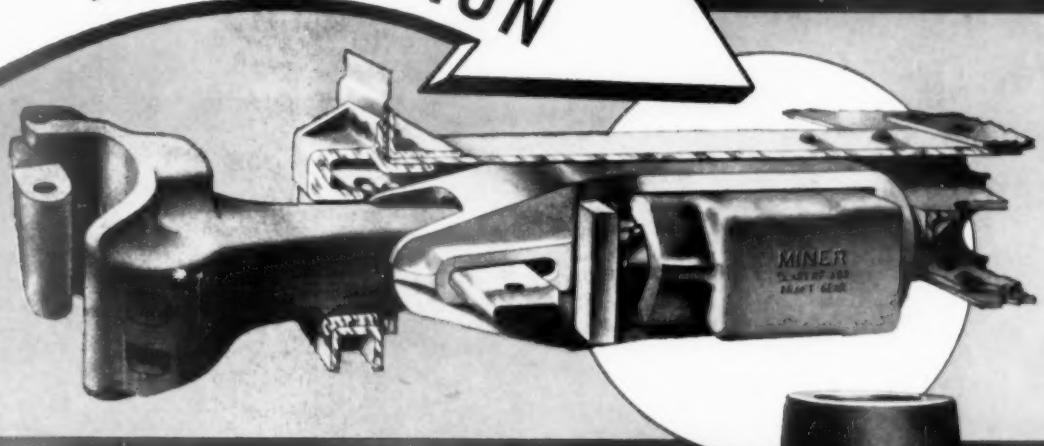

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RAILWAY AGE *weekly* September 21, 1959 • Vol. 147, No. 12

Week at a Glance

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Planning For 1960

Week at a Glance CONT.

Current Statistics

Operating revenues	
7 mos., 1959	$5,847,512,418
7 mos., 1958	5,329,684,214
Operating expenses	
7 mos., 1959	4,562,546,451
7 mos., 1958	4,353,181,571
Taxes	
7 mos., 1959	632,589,611
7 mos., 1958	502,477,821
Net railway operating income	
7 mos., 1959	462,965,823
7 mos., 1958	300,654,566
Net income, estimated	
7 mos., 1959	337,000,000
7 mos., 1958	203,000,000
Average price railroad stocks	
Sept. 15, 1959	103.09
Sept. 16, 1958	90.96
Carloadings revenue freight	
36 wks., '59	21,658,845
36 wks., '58	20,158,714
Freight cars on order	
Aug. 1, 1959	40,309
Aug. 1, 1958	25,994
Freight cars delivered	
7 mos., 1959	22,545
7 mos., 1958	31,658

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Short and Significant

Frisco's long fight to win control . . .

of the Central of Georgia has come to an end. Frisco has petitioned the ICC recommending appointment of the Hanover Bank of New York as voting trustee for its CG stock under a voting trust agreement. Frisco owns approximately 71% of the southern road's capital stock. Earlier, Frisco withdrew a suit asking federal district court to void an ICC order requiring the road to sell its CG stock or place it in trusteeship.

Texas-New York LPG pipeline . . .

proposed by the M-K-T and the New York Central to parallel the tracks of the two roads (RA, Oct. 27, 1958, p. 7) appears to have gone by the boards because of difficulty in arranging financing. The M-K-T is now reported to favor a separate pipeline from western Texas to Minnesota that would not follow the Katy right of way. The NYC would not be involved in this venture.

A $15-million drain . . .

on the financial resources of the state's railroads is the description the New York State Railroad Association has applied to N.Y.'s "excess crew" law. The association, speaking for 11 Class I railroads in the state, documented its statement with 400 pages of testimony filed last week with the state Public Service Commission. The PSC will begin public hearings on the controversial law Oct. 5.

NOW! a standard warranty on Westinghouse ReManufactured* "AB" Freight Brake Equipment

Thousands of sets of "AB" Freight Brake Equipment have been completely ReManufactured in our shops during the last few years. Now it is possible to offer to the railroad industry standard warranty on all "AB" Freight Brake Equipment that is ReManufactured in Westinghouse Air Brake facilities.

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Ship Your Used "AB" Freight Brakes To Us—
We ReManufacture Them To Standard Warranty

Items to be Returned to Westinghouse for ReManufacture		New Material Furnished by Westinghouse		We Return to You
AB Valve with (Service Portion Body Having Filter Protection for Charging Chokes	+	**AB Valve Accessories** Vent Protector, Release Valve Handle Details	=	Complete "AB" Equipment with Standard Warranty
AB Reservoir		**Brake Pipe Details** Dirt Collector, Cut-Out Cock, Brake Pipe Tee, Wabcoseal® Angle Cocks, Hose and Couplings		
AB Brake Cylinder having (Non-Pressure Head with Spring Guide		**Release Control Retainer**		
(Mandatory for new or rebuilt cars)		**Wabcoseal® Fitting Kit**		

Immediate and Long-Term Advantages in "AB" ReManufacture

IMMEDIATE

Eliminates need for expansion in shop facilities with accompanying increase in expense burden as need for maintenance increases.

Eliminates investment in equipment for pressure testing of reservoirs, now required under code regulations.

Automatically restores new bushing condition and absorbs rebushing costs inevitable after long service.

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Upgrades brake equipment for reliable operation through the recently extended 4-year cleaning period.

Minimum maintenance repairs required at succeeding cleaning periods.

It will pay you to investigate the advantages of having Westinghouse ReManufacture your "AB" freight brake equipment. You will find our charges for this service compare favorably with real costs for your own shop reconditioning and, in addition, you receive your ReManufactured air brake equipment with a standard warranty.

For information on costs and literature, call or write your Westinghouse Air Brake Representative.

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*"ReManufacturing" is the term Westinghouse Air Brake uses to describe an air brake rebuilt in the same plant under the same strict quality control conditions that prevail during original manufacturing. ReManufacture is the only way of upgrading "AB" Equipment to standard warranty.

Westinghouse Air Brake
COMPANY
AIR BRAKE DIVISION WILMERDING, PENNA.

Forwarder Volume Rates OK'd

► **The Story at a Glance: Forwarder volume rates have been cleared by the ICC in a decision which embodies a Commission determination that forwarders may handle shipments of any size.**

The decision, in I&S No. 6993, was a setback for the trucking industry, which contended generally that forwarders should be confined to the handling of small shipments which would not normally move in truckload lots.

Forwarders offering the service involved have been using Plan III railroad piggyback service, which is transportation on flat cars of highway trailers furnished by shippers.

Forwarder volume rates between Chicago and New York are those specifically cleared by the Commission. The Plan III piggyback rates, which the forwarders use, are under investigation by the Commission, but they have been in effect since July 1958.

The case out of which its present report came raised questions which the Commission listed as follows:

1. May freight forwarders handle shipments of any size, and, if so, may they establish rates based upon minimum weights so as to attract volume shipments?

2. In the usual course of business, will assembly, consolidation, break bulk, and distribution service be performed under the volume rates?

3. Is a highway trailer transported on a railroad flat car under the proposed rates an instrumentality of transportation, and, if so, may a freight forwarder lawfully furnish it?

4. Are the rates intrinsically lawful?

The Commission answered all of these questions in the affirmative, thus rejecting contentions of various motor carrier protestants. These included the National Motor Freight Traffic Association, the Regular Common Carriers Conference of American Trucking Associations, and the Eastern Central Motor Carriers Association.

The forwarder rates which were in issue are subject to minima ranging from 10,000 to 30,000 lb. Previously, forwarders operating in official classification territory had generally maintained rates the same as those of truckers on shipments weighing less than 10,000 lb. Only in exceptional situations did they offer lower rates subject to higher minima. This was because the spread between their rates and the rail carload rates, which they had to use, was insufficient to permit the establishment of lower rates on a profitable basis.

That situation changed when the Plan III piggyback service became available. Thus the forwarders' bid for bigger shipments "with the avowed purpose of meeting motor carrier competition," as the Commission put it.

As to contentions that forwarders were limited to the handling of small shipments, the Commission looked over the Interstate Commerce Act's Part IV which contains the forwarder-regulation provisions. It found nothing there which limits the weight of a shipment which may be handled by a forwarder. The Commission also cited previous decisions wherein it had sanctioned forwarder rates subject to minima up to 30,000 lb.

On the matter of whether consolidation and distribution services are performed, the Commission noted that the rail tariffs require that at least two different commodities be loaded on each flat car. It recognized that there are "occasional" instances where one of the trailers may be loaded with only one shipment from one consignor to one consignee. It concluded, however, that even in those instances there is assembly and consolidation of the shipments for delivery to the line-haul carrier as one shipment.

Under the railroad tariffs, the forwarders not only furnish the trailers but also transport them to and from rail loading and unloading ramps. The tariffs provide for the transportation on a flat car of not more than two trailers, empty or loaded with not more than 70,000 lb or less of freight.

The question of whether the trailers are instrumentalities of transportation was raised by the protestants because Section 418 of the Act makes it unlawful for forwarders (except for terminal services) to utilize "instrumentalities" of carriers other than common carriers. The forwarders replied that the trailers are "nothing more than containers of large boxes." The Commission disposed of the issue with this comment:

"Aside from the question of whether trailers when loaded upon flat cars are instrumentalities or containers, there is no contention that the ordinary shipper may not furnish the trailers under Plan III rates, and we think they likewise may be furnished by forwarders. . . . In its relation with carriers by railroad, a freight forwarder is in

Pending Legislation Still 'Alive'

The act which liberalized benefit provisions of the Railroad Retirement and Railroad Unemployment Insurance Acts was the only important railroad legislation to come out of this year's session of Congress. The session ended Sept. 15.

But the same Congress will return next January—so all bills left pending at various stages short of final enactment remain alive. These include many proposals of interest to the railroads. Among them are bills to carry out the industry's legislative program as well as railroad labor's "make-work" bills which management opposes. The outlook for legislation in 1960 is discussed in an article beginning on page 39.

The act to liberalize pension and unemployment benefits met demands of the Railway Labor Executives' Association, but included none of the counter proposals advanced by the AAR. It was thus a complete labor victory. Generally, it increased annuities under the retirement system by 10% and benefits under the unemployment system by 8% to 25%. The AAR has estimated it will cost the railroads about $200 million a year.

many, perhaps most, respects a shipper. . . . Moreover, it appears that the prohibition in Section 18 against the use of instrumentalities or service of carriers, other than common carriers, was designed to prevent forwarders from using contract carriers."

A dissenting opinion came from Commissioner Walrath, who said the Commission's clearance of the forwarder rates "will permit a new and previously unauthorized method of competition for motor carriers without the safeguards of requiring proof of public convenience and necessity." He also said: "Advances in transportation techniques and flexibility in routing of traffic to take advantage of the inherent advantages of each mode of transportation (in order to benefit the shipper) must always be encouraged, but when progress in methods of achieving such flexibility is seized upon by the form of carriage to alter the character of its normal functions without Congressional sanction and to the detriment to another essential mode of public service without offering a service advantage to the shipper not already available, such development in my opinion constitutes destructive competition. . . . Unless the national transportation policy is to be overlooked here, the volume rates in issue should be found contrary to the public interest and unlawful, principally because of the departure from the traditional service function of freight forwarders."

Reefers Show Up Best In Meat Shipment Test

The transportation of freshly killed beef in mechanically refrigerated cars would appear to be superior to TOFC movement using mechanically refrigerated equipment—at least until some kinks are ironed out of the latter. This was the conclusion of a test conducted by the U. S. Department of Agriculture in cooperation with American Stores Co.; the Chicago, Burlington & Quincy; the Pennsylvania; Fruit Growers Express; and General American Transportation Corp.

The test shipment moved in two mechanically refrigerated cars, two trailers, and a typical water-ice car, for control purposes, from Lincoln, Neb., to Philadelphia. One of the mechanically refrigerated cars performed well en route, maintaining proper air and commodity temperatures [desired temperature range is from 31 to 35 deg fahrenheit]. The second car had trouble with its refrigerating unit, but this was repaired toward the end of the trip.

The water-ice car showed greater fluctuations in temperature than either the mechanically refrigerated cars or the trailers, especially when standing still. Temperatures fluctuated between 37 and 49 deg.

The two trailers had somewhat higher temperatures than desired, especially at the rear of the load. It was felt that this might be improved by blowing part of the cold air from the refrigerating unit to the rear of the trailer through ducts.

Watching Washington *with Walter Taft*

● **DRIVE TO END FEATHERBEDDING** is now likely to become an emergency board case of the usual type. That's the outlook as a result of President Eisenhower's refusal to grant railroad management's request for appointment of a special commission to study the matter.

THE PRESIDENT'S REFUSAL came in a letter which Mr. Eisenhower sent to AAR President Daniel P. Loomis. The letter was a reply to Mr. Loomis' Aug. 17 request for appointment of a special Presidential commission to study the problem.

THE PRESIDENT RECOGNIZES, so he said, that important issues are involved. But he feels that any intervention by the White House could interfere with normal collective bargaining processes, which are in the offing, in view of the Nov. 1 expiration date on present working agreements.

SO, the decision that he should not consider the railroads' proposal "at this time" involves no expression of the President's opinion on the merits of the controversy. From this assurance, Mr. Eisenhower went on to advise Mr. Loomis of his "earnest hope" that the upcoming negotiations will find labor and management representatives exerting "every effort through negotiations to settle the issues between them."

FORMAL NOTICES calling for an end to featherbedding are not expected to be served by the railroads until Nov. 1. Present contracts, as management interprets them, now permit filing of demands for wage adjustments which would not become effective prior to Nov. 1, but bar rules demands until that date when moratorium provisions of present agreements expire.

NOTHING has yet come out of a 1955 emergency-board recommendation that a commission be established "to revise and modernize the wage structure as a whole of the operating classifications in the railroad industry." The study which that board had in mind would have been like that recommended in the AAR proposal which President Eisenhower rejected.

INITIATIVE for establishment of the proposed commission "ideally" should come from the carriers and interested unions, the 1955 board suggested. It added, however, that initiative might well come from interested government agencies, such as the National Mediation Board, ICC, Secretary of Labor, Congress, "or the President."

AFTERMATH of this recommendation was fruitless correspondence between NMB and the interested parties. NMB is understood to have urged the parties to get together for conferences on the problem. Its proposal was accepted by railroad management, but rejected by the unions. So the 1955 board's recommendation remains unimplemented.

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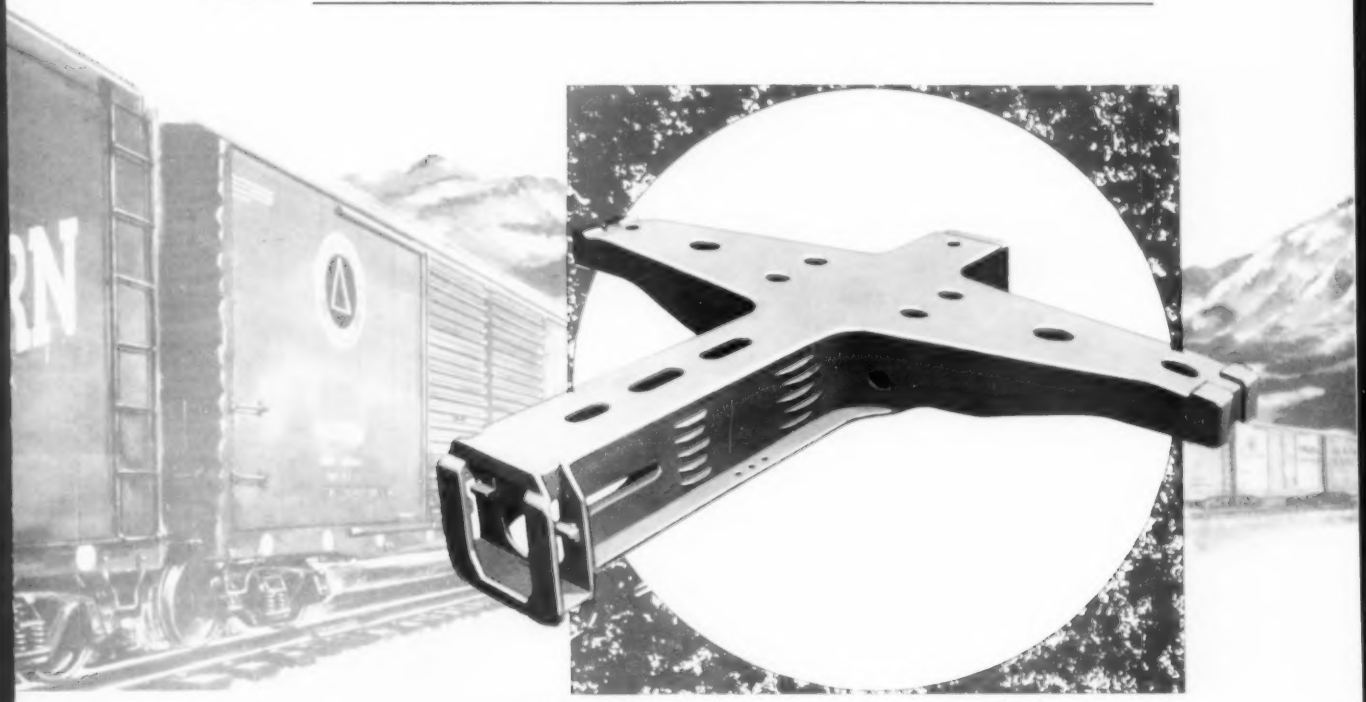

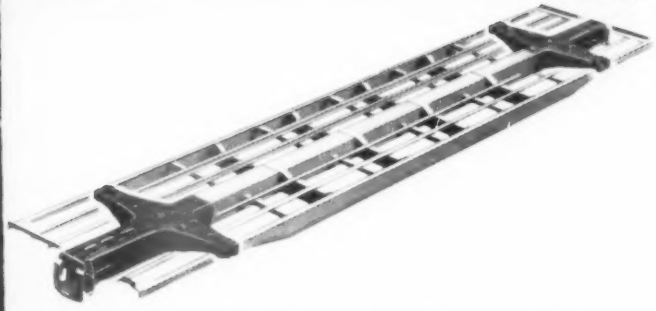

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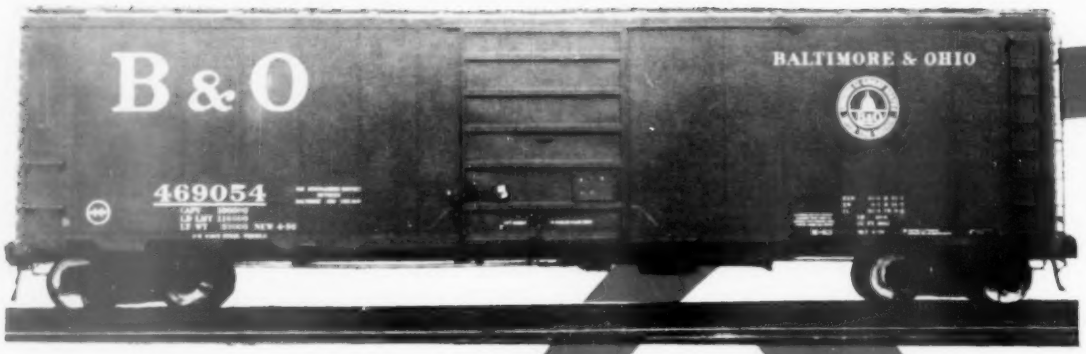

B&O 50-ton Box Car with cutaway floor for close inspection of Brake-X truck after three years continuous service.
TRACK No. 5 Water St. Ex. Tracks

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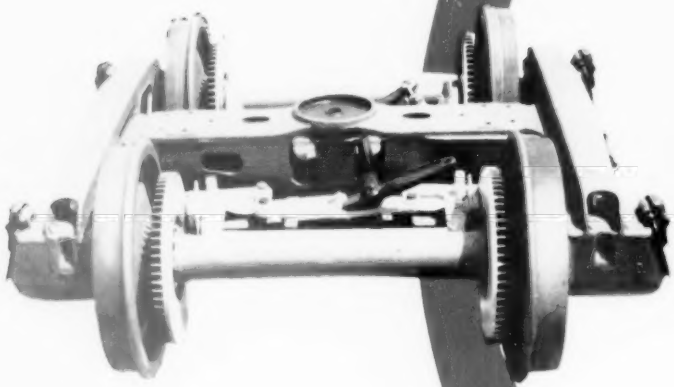

Latest model of Buffalo Brake-X Truck now in service or on order on more than 200 cars of every type in the U. S. and Canada.
SPACE 240-1-2-3-290 Hotel Sherman

New York Central 70-ton Flexi-Van piggyback car equipped with Brake-X. Loading demonstrations will be given at frequent intervals during exhibit.
TRACK No. 6 Water St. Exhibit Tracks

see ALL three...

Shippers Invited to Track Show

Chicago-area shippers are being invited to see portions of the track exhibit at the forthcoming Coordinated Mechanical meetings in Chicago Sept. 21-23.

The move to invite shippers to the exhibit area is new. It results from an arrangement worked out by the Buffalo Brake Beam Co. The New York Central will spot one of its new 70-ton Flexi-Van piggyback cars, while Baltimore & Ohio will show a 50-ton box which has had more than three years' continuous service with disc brakes.

While the convention track exhibits, as well as those at the Hotel Sherman, are primarily for railroad officers attending the Chicago meetings, the NYC will have traffic representatives on hand to discuss its equipment with shippers and their representatives. Invitations to individual shippers are being handled by the railroad.

Buffalo Brake Beam is furnishing the exhibit track space, and equipment on the two freight cars will include Buffalo's Single Disc Brake-X.

According to the participating companies, the move to invite shippers is good public relations because it will increase their understanding of how railroads and their suppliers are making continuous improvements in railroad equipment and operation.

from

RAILWAY AGE *weekly*

August 31, 1959

AT THE ALLIED CONVENTION EXHIBITS

Chicago—Sept. 20-23

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Traffic Men Need 'New Skills'

► **The Story at a Glance: Because transportation "is going through a very interesting period" of major and rapid changes, traffic men—both carrier and industrial—are faced with the challenge of developing new skills, new methods and new techniques for providing, selling and controlling movement of freight.**

These "changes" in transportation itself, and the new service, selling and control methods which they require, provided the underlying theme for the American Society of Traffic and Transportation's fifth conference and seminar, held at Michigan State University, Sept. 10 and 11.

"Old methods are not enough."

"The new concept of marketing transportation will be adopted by all major railroads, as well as other carriers . . . to make it easier for our customers to do business with us."

"Readily available [mathematical] techniques may be used to analyze distribution problems."

"I visualize the possibility of an electronic brain in Washington, connected by wire with all parts of the country, to receive and analyze tariff proposals as they are filed; automatically notify all interested parties as soon as they are approved."

Each of those statements was made by a different speaker to an audience of more than 300 carrier and industrial traffic executives at East Lansing, Mich., on Sept. 10, during the fifth biennial seminar of the American Society of Traffic and Transportation.

The first statement—that old methods are no longer adequate—came from Ross W. Bennington, director of traffic, U. S. Rubber Co.; the second, from Malcolm W. Roper, vice president—marketing, of the Western Pacific; the third, from Dr. Edward Smykay, professor of marketing and transportation at Michigan State University; and the fourth from E. G. Plowman, vice president—traffic, U. S. Steel.

Transportation, Mr. Bennington said, is "an ever-increasing problem of industrial logistics." To solve it, industry is re-assessing its marketing areas; analyzing its overall distribution costs; eliminating preventable handling charges; restudying its raw materials, its finished products, and its packaging methods; and striving to obtain all possible economies in meeting its basic transportation needs.

From the carriers, he continued, industry wants primarily "reasonable and consistent service," on "attractive and regular schedules," so production plans and customer requirements can be geared to known levels.

It wants, in addition, proper selling of transportation by carefully trained men; suggestions by carriers as to how industrial transportation needs may be better met; specialized equipment for better handling of bulk or multiple loads; some solution to the increasing cost of handling "small shipments."

(Continued on page 16)

Editors Afield

EAST LANSING, MICH.

Attendance honors at the American Society of Traffic and Transportation Conference went to the Southern, hands down; out of a total registration of just over 300, 74 came from that one company. "After 30 years out of school," one of them said, "it's pretty tough to hit the books again for these society exams. But the boss [Southern Traffic VP W. M. King] wants us well trained. And it must be paying off, because some of our close competitors are getting after their traffic men to take the AST&T courses too."

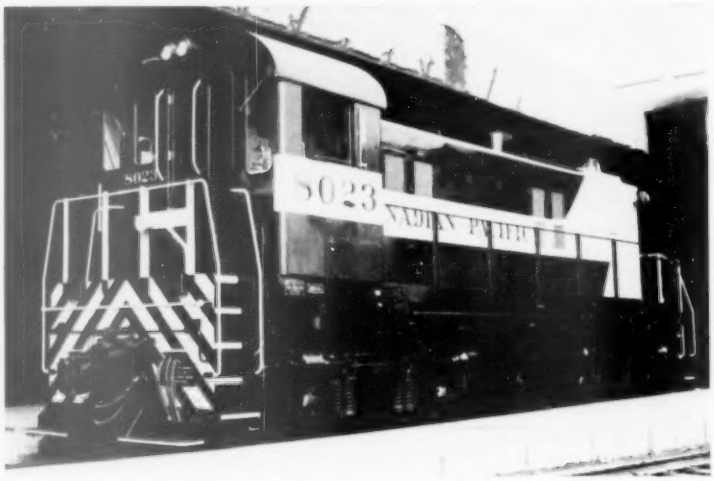
Dr. Edward Smykay, Michigan State's marketing professor, got a sympathetic laugh when he told the conference: "New views of railroad management with regard to rate reductions consistent with sound economic principles have appeared to cause, from the trucking group, a uniform reaction of monotonous negative disapproval followed by an appeal to the appropriate regulatory body." He's right, of course—but if memory's not entirely at fault, that was railroad reaction 25 years ago, when trucks were lowering rates. So the economic wheel appears to have turned full circle. Positions are reversed—which could be an encouraging sign, that competition fears the results of the rate offensive railroads have so recently begun.

Karl Voth, who heads up sales for the traffic-minded Monon, shares the belief expressed to the AST&T by WP VP Malcolm Roper—that the "new concept" of "marketing" transportation will be adopted by all major railroads (RA, Sept. 14, p. 54). "It's got to come," Mr. Voth says. "We on the Monon can't make it a crash program. We're still a year or two away from full realization of the idea. But we are definitely headed toward it."

Ever wonder how a railroad public relations man spends his time? Here's what Fred Costello, who handles PR for the Chesapeake & Ohio at Detroit, did in a couple of morning hours Sept. 9:

- Notified a happy little girl she had won a toy train, the evening before, at the railroad exhibit at the Michigan State Fair; arranged for her and her parents to attend the fair again, that evening, to receive the train in person from Michigan's publicity-minded governor, Mennen Williams.
- Set up C&O car ferry transportation, Milwaukee to Ludington, and a dinner at Ludington, for 20 Russian railroaders who are touring this country—independently of Khrushchev—to find out how capitalist carriers carry.
- Arranged to have the C&O's Hy-Rail car taken out of the railroads' fair exhibit, shopped, and made available to the Michigan state tax commissioner for an inspection trip which law requires him to make annually over part of the state's rail system.
- Discussed plans for a rail tour of Detroit's harbor and industrial district with Harold McKinley, of the local Railroad Community Committee; George Wallace, district sales manager of the Pennsylvania, and Frank Betancourt, DFA of the Wabash.
- And arranged a Railway Age interview with David Jay, project engineer for the Ford Motor Co.'s rail-traveling, air-supported "Levacar"—about which there'll be more detail in an early issue.

Gardner C. Hudson
Traffic & Transportation Editor



CPR Gets Its 1,000th Diesel Locomotive

Diesel road switcher No. 8023, a 1,000-hp unit, has been delivered to Canadian Pacific. Built by Montreal Locomotive Works, the unit is CPR's 1,000th diesel locomotive, bringing the line a step closer to its 1961 target date for complete dieselization.

Commissioners Take to the Road

Members of the ICC went afield last week, making speeches in Chicago, Atlantic City, N. J., Louisville, Ky., and Washington.

Chairman Tuggle spoke at Louisville before the Ohio Valley Transportation Advisory Board. He discussed the rate-freedom provisions of the 1958 Transportation Act, which were to the fore in the Commission's recent decision in the so-called Paint Case (RA, Sept. 14, p. 9).

Without mentioning that case, the chairman nevertheless seemed to be defending the majority report against Commissioner Webb's complaint that the decision left unanswered the question of the extent, "if any," to which the 1958 act changed the rule of rate-making.

The act "has cleared the air somewhat in the field of inter-mode competitive rate making," Chairman Tuggle said. He also said: "I think it would be wholly impractical to devise any fixed general rules or formula for determining the lawfulness of freight rates—considering the many different kinds of factual situations that are presented in contested rate cases."

The Washington and Atlantic City addresses were both made by Commissioner Webb—the former before the District of Columbia Trucking Association and the latter before the National Petroleum Association.

At the truckers' meeting, the Commissioner discussed pros and cons of proposals to remove the exemption from regulation which now applies to terminal trucking within commercial zones of cities. He said sentiment for regulation appeared to be growing stronger within the local cartage industry, and he thought this "rather unusual" at a time "when many students of transportation are clamoring for drastic curtailment of the Commission's authority."

It is "encouraging," so Mr. Webb said, "to know that these new friends of regulation are generally more familiar with the practical problems of transportation than those who advocate virtually unrestrained competition." The commissioner added that it has always seemed to him that "the best safeguard against the nationalization of the transportation industry is the intelligent regulation of this competitive enterprise in the public interest, and not a return to the law of the jungle where the strongest, but not the fittest, would survive."

At Atlantic City, Mr. Webb discussed last January's report of the House's anti-trust subcommittee, which criticized Commission administration of pipeline regulatory provisions of the Interstate Commerce Act. He noted that the law makes regulation of pipelines much narrower in scope than that of other carriers. He sees no need for changing that situation, although he does foresee that more regulation might well be called for if pipelines begin to handle many more

(Continued on page 111)

TRAFFIC MEN

(Continued from page 15)

and "elimination of inter-carrier bickering."

With today's emphasis on modern distribution methods, and the "wealth of transportation available to industry," the "sentimentality" of routing freight "by good old Joe's outfit" is no longer satisfactory. Carriers, with only service to sell, need not be reluctant to sell it where they can help their customers by so doing. "Selling transportation is no different than selling shoes—but it is more difficult," so the carriers must prepare their salesmen, know their customers' problems, suggest how their services "can be of particular benefit to a particular shipper," and fully exhaust all efforts to keep their own facilities at the most efficient levels.

A Practical Answer

Mr. Roper's expression of confidence in the growth of the marketing concept (RA, Sept. 14, p. 54) came right after, and as a practical answer to, Mr. Bennington's call for better transportation salesmanship. The WP vice president defined marketing as "a corporate state of mind that insists on the integration and coordination of all of the marketing functions which, in turn, are melded with all other corporate functions, for the basic objective of producing maximum long-range corporate profits." Adoption of this concept, he said, "creates the necessity for numerous changes which are not too readily discernible" and which may have to evolve over a considerable period.

Dr. Smykay's talk dealt primarily with application to distribution costs of "readily available" mathematical techniques. "No one," in his opinion, "is more suited" to apply these techniques than the industrial traffic manager. But, "too frequently," the "study and practice of traffic management is unduly legalistic"—too concerned with "defending the status quo before administrative commissions rather than analyzing the real traffic needs of the company."

Mr. Plowman—who said he was emphasizing "new techniques" rather than "new skills"—suggested that modern communications, combined with electronic computers, could vastly speed up the filing and adjustment of rate proposals. His idea of routing such proposals through a centralized "electronic brain" would not, he emphasized, change the Interstate Commerce Commission's power to suspend, modify or reject suggested rates, but would speed and simplify their processing.

Cars Must Match New Conditions

Strike dislocations are short term prospect; railroads must plan now for freight cars which can keep them competitive.

By F. N. HOUSER, Jr.
Associate Editor

Steel and speed are two criteria which must be uppermost in the minds of those planning for the freight car fleet of 1960.

What happens as idled steel mills swing back to full production can do much to determine car demand, car shortages, and car deliveries for next year. What happens in U. S. railroading as competition necessitates higher train speeds and faster loading and unloading methods can determine the investment in, and design and obsolescence of, cars and car components.

Effects of the steel strike will plague railroads for months to come. With mills going full-blast, the supply of hoppers, gondolas and box cars can become major problems. Simultaneously, car builders and railroad shops will be experiencing increasing difficulties because of depleted stockpiles and backlogged steel orders.

Car supply problems will be particularly acute in the Northeast and Allegheny regions. Railroads in the area with the major steel-producing centers have never fully recovered from the 1957-1958 recession. While the bad order ratio for all U. S. roads was 7.5% on August 1, down from last March's 9.2%, the ratio for the Alleghany region roads was 18.9%. Here is a potential source of shipper complaints and traffic diversion.

Reduction in bad order cars does not necessarily mean that railroads are in position to handle more traffic. This was explained by ICC Commissioner H. G. Freas last June when he said "bad order reduction is not due altogether to a greater number of car repairs, but is attributable in large part to heavy car retirements . . . In April, retirements totaled 13,430 cars, the largest number retired in any month during the past ten years.

"Some carriers have maintained good records in maintaining cars in repair and in total ownership. Many others are now moving in that direction. Let's hope that what the industry as a whole is doing is not too little and too late."

During the past year, there have been reductions of 3 to 4% in the ownership of gondola, hopper and box cars. However, faster movement of the remaining cars can give railroads the same carrying capacity they had before. With railroads tailoring their lines, traffic control and motive power for faster freight train operation, the cars which are to be moved in these trains must be tailored for the job too.

Railroads must plan to spend more for each individual freight car. Freight service of the 1960's should not be provided with equipment of the 1930's. If the traffic is to be moved at all, it will have to be moved in cars engineered and equipped for tomorrow's operations.

E. S. Marsh, Santa Fe president, told railroad mechanical officers last June that "this is an era of railroad transportation that puts the emphasis on fast, dependable freight service and intensified efforts to reduce costs of operation and maintenance."

Railroads, able to justify the increased investment in diesel motive power, should now prepare to justify an investment in tomorrow's freight car fleet.

More than ever before, this fleet will consist of cars tailored-to-the-traffic. The good-for-everything-type of rolling stock is no longer acceptable to many shippers. To hold present traffic and recapture business lost to other forms of transportation, the trend has been and will continue to be toward cars designed and built for the service for which they are intended: cars with load-securing and damage-prevention equipment; insulated box cars, coil cars, wood-chip cars, covered hoppers and bulkhead flats; cars with shock-control draft gears and underframes; box cars with wide door openings for lift-truck loading and special linings to prevent damage by motorized equipment.

Cars such as these not only guarantee damage-free delivery of shipments; they cut material-handling costs in loading and unloading operations. They will be built in greater numbers.

Equipment engineered for the fast-growing piggyback operations (up 58.8% over last year) will be in demand. During the past few years expediency dictated the conversion of existing flat and gondola cars to this relatively new service. But experience has proved the value of the 85-ft car capable of carrying two 40-ft trailers. These cars will be increasingly popular.

Aluminum as a basic car structural material got a big boost with the 1,200-car order by the Southern. For years railroads have investigated the possibilities of aluminum. Many aluminum cars have been built but always in small quantities. Wider use of this material and its alloys is probable (the B&O recently ordered 100 car sets of aluminum box car linings). Railroads will watch with keen interest the performance of the Southern cars after their delivery later this year.

A high percentage of new freight cars will run on roller bearings. This year, railroad executives not only talked about roller bearings, they ordered over 23,000 car sets in the first eight months. This is about the same number of freight car roller bearings as were installed in the past three years, and 50% of the total number in service on Dec. 31, 1958.

There is a distinct possibility that roller bearings may be made mandatory on all new freight cars within the next few years. Faced with the probability that demand will outstrip present production facilities, Timken recently announced the adding of another line at its Columbus, O., plant that will double its nominal capacity of 20,000 car sets per year. The trend would appear to justify this investment of $5,250,000.

While tomorrow's cars are being built, today's car fleet will still be with us. It must be brought to a standard which will allow it to operate with the cars of the 1960's. This will involve completion of the current journal lubricator program, elimination of cast iron wheels, and more rigorous inspection of draft gears. Some method for controlling movement of the axle in the solid bearing journal box, and subsequent installation of a back seal, promise to make this assembly more compatible with today's style of freight train operation.

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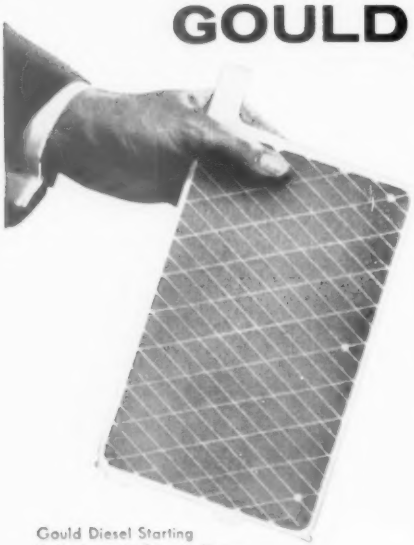

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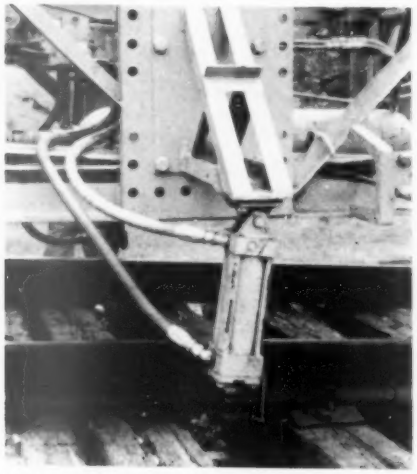
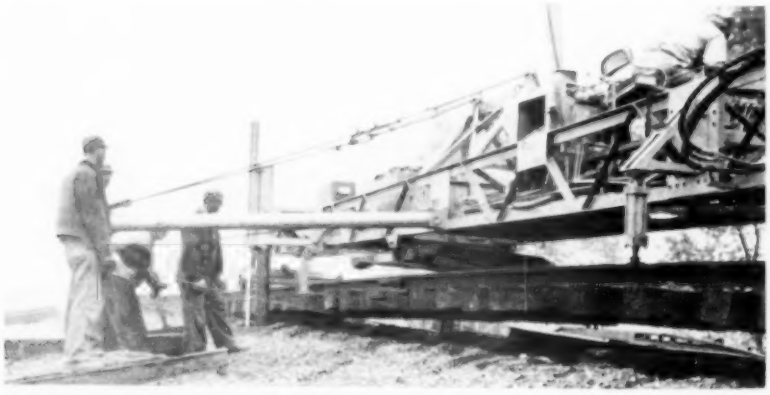


Hydraulic hammer on each side knocks tie down. Conveyor belt ejects tie to either side.

Lining head controlled by levers near rear end where operator observes alinement. One man replaces lining crew.



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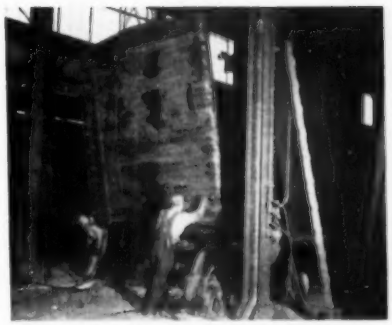

At their DeSoto shops, Mo-Pac does big things in a big way, *fast*. Specially developed high-speed assembly line technique sends 8 new boxcars into service every day.

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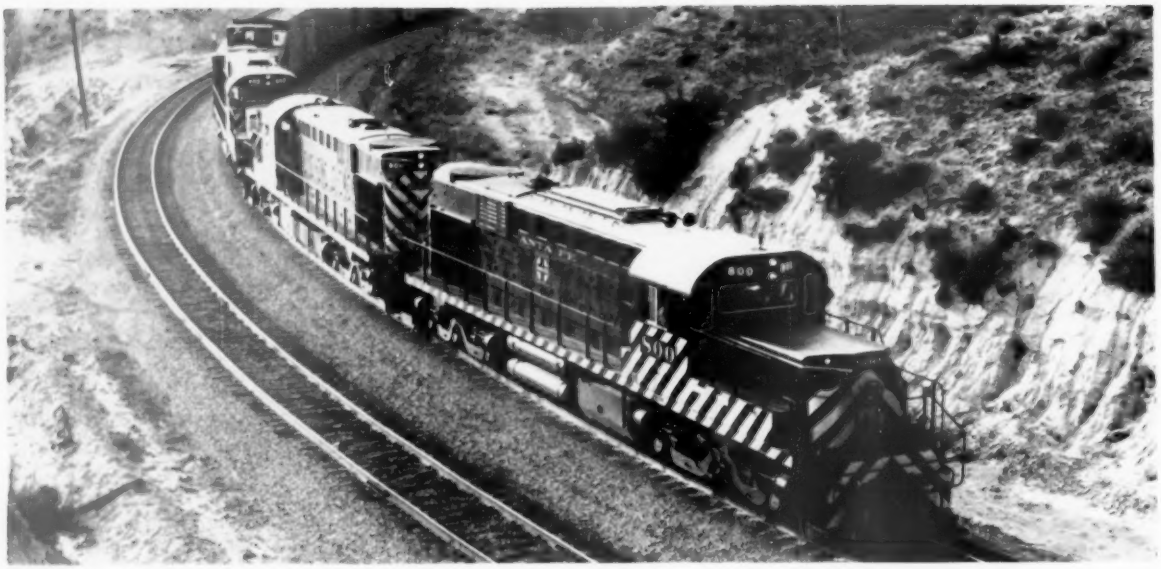
Next Year's Locomotives Will



ALCO 2,400-hp turbocharged DL-600-B Santa Fe low-profile diesels round curve at top of Cajon Pass.

By C. L. COMBES
and A. G. OEHLER

Horsepower and obsolescence are key factors in the motive power picture. Builders have produced and have in production the more powerful diesels needed to move high-speed freight traffic with fewer units. And the big dieselization programs which immediately followed World War II are responsible for placing sizeable chunks of the diesel fleet in the old age bracket.

Both age and the inherent economies of new designs make it essential that these older units be replaced or rebuilt if operating and maintenance costs are to be kept within reasonable limits. Over 400 road freight units delivered in 1945 will reach the 15-year mark in the coming year. By 1961 this figure will jump to over a thousand units; by 1965, to over two thousand units, as the impact of the big post-war diesel deliveries is felt.

Modernization of the diesel fleet will be accomplished by acquisition of new units and by a major rebuilding program for existing power. There are differences of opinion on how to do the job, depending on bookkeeping and the remaining equity in old power. But it is certain that those units that have outlived their economic lives will be either moving back to the builders or to the scrap heap in greater numbers. There is no alternative if the railroads' service and pocketbooks are not to suffer.

These same pocketbooks are influencing present thinking and next year's outlook. The steel strike has buttoned up the purses of most of the coal and steel-moving roads. Consequently, we are again in a deferred buying and repair period after just getting back into pre-recession operation. Before the strike, roads had been taking the more than 700 diesel units that were in storage a year ago and either putting them to work or into shops to make them serviceable. As of July 1, 1959, the number of stored diesels had dropped by 535 units from a year ago.

During the same period, units in or awaiting shop increased from 1,191 to 1,318. Faced with decreasing revenues, because of the long steel strike, Eastern and Pocohontas region roads have drastically curtailed their shop operations. This will mean accelerated repair and replacement programs for 1960 to meet operating department requirements for motive power as steel and associated traffic gets back into stride.

During the coming year, the railroads can select their motive power from an offering of models into which have been built more power and economy.

In the past two or three years, Alco Products has added the DL series, with its more powerful 251 engine, to its line. This series, headed by the turbosupercharged 2,400-hp DL 600 B, has refinements in design that produce better operating characteristics with less fuel and maintenance costs.

Currently, the big news is the two new series recently unveiled by Electro-Motive. Here also, the emphasis has been placed on more horsepower and reduction of operating and maintenance costs. In its series with normally aspirated 567 D-1 engines, EMD is offering the RS-1325, GP-18 and the SD-18. The GP-20 and the SD-24 comprise the new series with turbocharged 567 D-2 and 567 D-3 engines, respectively. All designations are indicative of horsepower ratings: the GP-18 and SD-18 have 1,800 hp, the GP-20, 2,000 hp, and the SD-24, 2,400 hp. Only the SD-024 has been delivered and in operation. All others will be ready later this year.

The new power railroads obtain during the next year will be selected from these models. Modernized units will be similar in capacity and performance as they are rebuilt with major components designed for the new models.

Road tests for the General Motors 2,000-hp free-piston gassifier locomotive over coming months are not intended primarily to prove the appli-

Have More Power and Economy

cability of this power plant to railroad service. Instead, Electro-Motive expects to use the railroad operation as a strenuous service test for a prime mover which is now envisioned as one for the stationary generation of electric power.

While N. C. Dezendorf, former Electro-Motive vice president and general manager, says that the free-piston gassifier can successfully burn high-sulfur fuels, he doubts that customers can justify the higher initial cost solely on this basis. "You might be better off if you'd refine the fuel a little bit and get some of that sulfur out," he says. The Electro-Motive D engine was developed so that it could successfully burn Bunker-C grades of oil.

Mr. Dezendorf said: "The D engine has the ability to burn a much wider range of fuels. It has been on test on the Union Pacific for several weeks and has burned fuel which is pretty close to Bunker C. It now has new type needle-valve injectors and, while we haven't designed it with the idea of burning Bunker C, it will burn practically any readily available fuel in the U. S. Now, it is only the real western railroads that have any surplus of Bunker C. Bunker C in Chicago costs as much as diesel fuel. So, it isn't a cheap fuel here; however, I'll say that this new D engine—that is, the turbo-charged 567 16-cylinder engine—will burn, with the new needle valve injectors, any fuel that is readily available to the railroads in this country. It doesn't like a high sulfur content fuel, nor does any diesel engine, as far as that is concerned."

To date, the steel strike has not had any appreciable effect on delivery of new or modernized power, and builders do not anticipate any serious difficulties. But the builders are concerned about the possibilities of outside suppliers of component parts not being in a position to meet their schedules. This situation could develop a production bottleneck if new steel does not become available within a reasonable time.

Increasing freight train speeds, which of necessity call for more locomotive horsepower, are at present exerting much influence on the design and performance of electrical equipment. If a railroad has a sufficient number of locomotive units, the easy way to get more horsepower when needed is to add units. This procedure is being used in many places, but railroads are looking with greater favor upon units of higher horsepower.

If the number of motors per unit is increased, the load per motor may not increase, but increased speeds call for greater durability and places an added load demand on generators.

This comes at a time when the electrical departments are anticipating million-mile motors. In the early days of diesel-electric road power, a 250,000-mile motor overhaul period was general practice. By means of better materials, improved design and higher quality maintenance, some motors now go 750,000 miles between overhaul periods.

The advent of epoxy resins and glass banding now indicate that insulation life can be extended. A change from steel to glass banding must be made with discretion, since it may degrade commutation. Direct-current, high-voltage testing is also serving to avoid unnecessary early failures. This is again aided by knowledge of how to avoid flashovers.

The finger is now beginning to point toward motor bearings and commutators. Longer-life bearings are being produced and new attention is being given to commutators. It has been the practice to rewind motors without giving attention to commutators which appear to be in good condition. Recently, dissembly of commutators on motors which are to be rewound has exposed creepage paths and other faults which made it almost certain that a rewind could not live out its guarantee. With increasing service life, it is beginning to appear that rebuilding of commutators may be a requirement of rewinding.

Another problem is presented by the fact that epoxy resins are so tenacious that they may be removed from motor slots only by means of "incineration." If it is necessary to use fire to release armature winding, then core insulation between laminations will be destroyed. Restacking and reinsulation of laminations would then be required.

The inference is that more replacement will continue to take the place of maintenance. Replacement rather than repair is fundamental to the automotive field. Replacement is now gaining as a diesel maintenance method. It takes the railroad shop out of the picture, perhaps at a cost, and leaves the railroad more exclusively to the business of transportation.

The Russian technical press recently announced that the Soviet Union now has somewhat more than 6,000 miles of electrified railroad. The U.S.S.R. is embarking on a railroad construction program which employs types of motive power best suited to specific needs. Their locomotives are rated 4,200 to 5,700 hp. Under a free economy, a railroad must be able to prove a profit conclusively and also have sufficient credit to make the investment before it can embark on any such program. It is further limited because it must stand on its own feet and can not pool resources. So, although it would be nice to have power units of such size, their advent must await a developing economy.

Other current electrical developments with a future include the use of electric heat. These involve space heating of limited dimensions, heating which is used for limited periods where the principle cost is that of installation, preventing the formation of ice on platforms, keeping passengers comfortable on wind-swept platforms, thawing of the ice bond between coal and coal cars, switch heating etc. In most of these applications, heating control can be automatic. Primary advantages are automatic control and low first costs.

The value of good lighting is being more widely understood. Values of illumination from 20 footcandles for stairways and washrooms to 180 for machine work and 200 for drafting rooms are now considered good economy. New types of mercury lamps are reducing power costs.

SANTA FE freight highballs through southwest hauled by EMD 2,400-hp turbo-charged SD-24 units.

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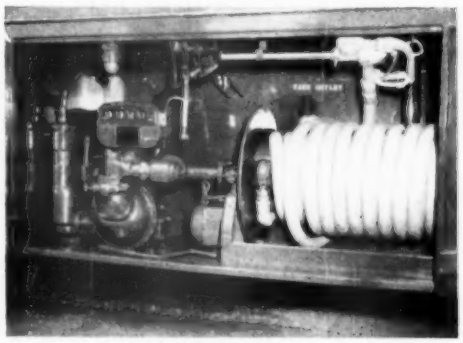

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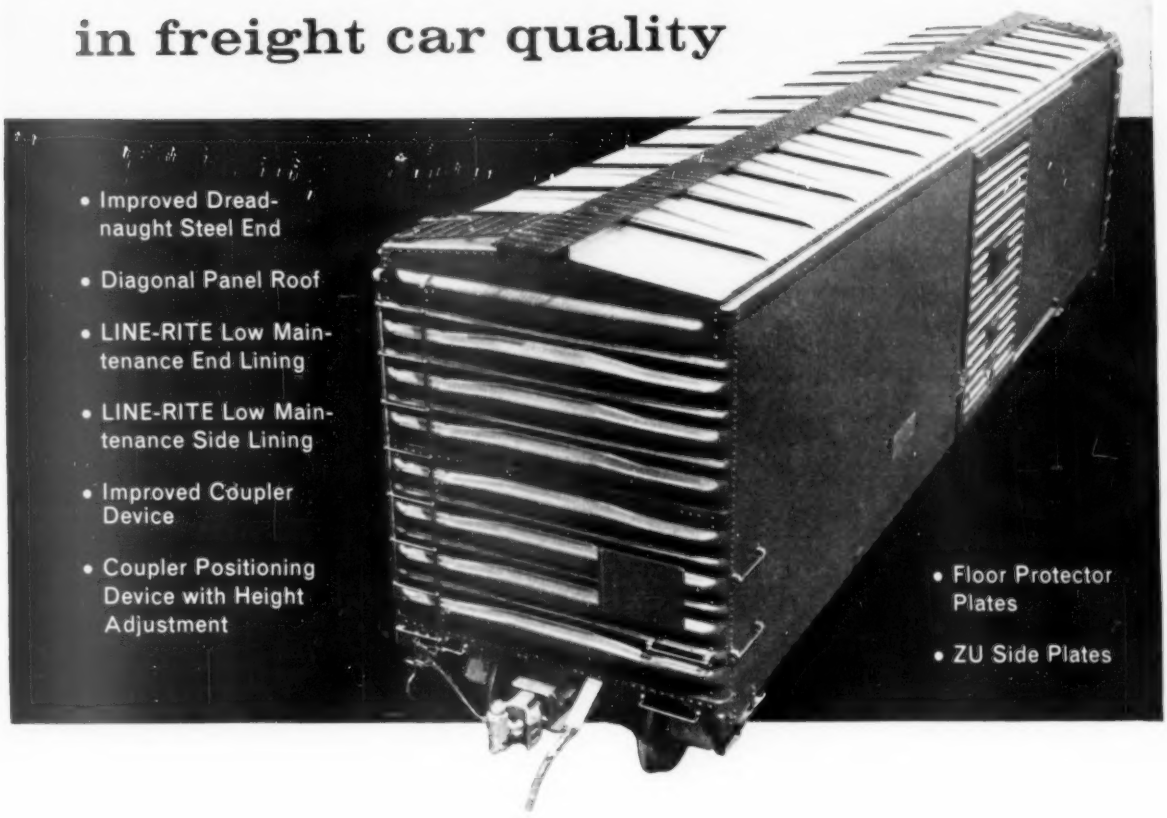

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Freight Carloadings Should

Forecast assumes that all the steel mills will be back at work around October 1. If the strike ends then, the outlook for the railroads is bright. RR purchases in 1960 may hit $3.1 billion.

By J. W. MILLIKEN
Director of Research
Simmons-Boardman Publishing Corporation

The steel strike has made the railroad picture temporarily gloomy. However, the outlook for the future—the fourth quarter of this year and 1960—is good.

Carloadings during the 1959 fourth quarter should total at least 9 million, while loadings for the whole year of 1960 should reach the 35-36 million level. These forecasts assume that all the steel mills will be back at work somewhere around October 1. Under these conditions the outlook for the railroads is bright, in spite of the pessimism now in vogue.

The business upturn for railroads in 1958-59 has not matched that of the economy generally. While railroad traffic has moved upward during the recovery, truck traffic has skyrocketed, and even during the steel strike appears to be well ahead of 1958 levels.

During the recovery, the Federal Reserve Board's seasonally adjusted index of industrial production jumped 29 points, from an April '58 low of 126 to 155 in June of this year. Between the same dates, the FRB's index of carloadings, seasonally adjusted, moved up only 15 points from 72 to 87. (During May, the carloadings index touched its high point for 1959, two points above the June figure.)

The failure of the railroads to participate in the country's prosperity to the same extent as the truckers is explainable in large part by the character of the traffic handled by the two competing media today. Truckers, by and large, are handling the larger percentage of consumer non-durables and durables, and light industrial equipment. Railroads get their maximum traffic when heavy industry particularly is engaged in large capital expenditures programs.

Only recently has industry reversed, mildly, the downturn in capital spending. But clearly the electric utilities, the steel people and suppliers of building materials are preparing for the "sizzling sixties" in a big way. Orders for electric generating equipment have been increasing rapidly. Expansion of existing facilities, plus some new plants to increase basic capacity, is under way in the steel industry. Orders for machines tools are rising. Thus, 1960 is shaping up like a good year for the railroads. Present indications are that the first half of 1961, too, will find the economy moving along at a neat clip.

Once the steel strike is over, there will be a definite need to fill up the supply "pipelines" again. Some top people in the steel industry believe that right now there's a backlog of orders large enough to keep production levels at capacity for six months. While inventory accumulation probably will not proceed at a rate as rapid as that which preceded the strike, there obviously will be a large need for steel to replace that used during the period when next to none was produced.

It also seems likely that there will be a larger than usual movement of ore by rail, since the Great Lakes ore fleet will be forced to shut down soon for the winter. It's possible that railroads in the Great Lakes area, as well as those hauling imported ore, may move some winter traffic they may not have expected at the beginning of 1959.

Prior to the steel strike, piggyback traffic each month was at higher levels than in the preceding month. Along came the strike, and down went piggyback loadings. Business, however, did not slump as badly as carloadings generally.

Average weekly loadings for all traffic in the period after July 1 were off about 23% from levels of the preceding month. Piggyback traffic fell only about 12%. This speaks well for the character of traffic which the relatively new TOFC service has been able to pick up for the railroads.

The downturn in piggyback loadings will be reversed once the steel mills reopen. This, plus the fact there will be some new piggybacking railroads, should help reverse the usual mild drop in fourth-quarter loadings as compared with the third quarter.

In 1960, TOFC traffic again should resume its climb upward. Carloadings should total at least 500,000, compared with about 400,000 this year. Favorable disposition of some of the Plan III and IV rate cases before the Interstate Commerce Commission would help substantially to increase this traffic further.

One major hedge must be made in any forecast of traffic for next year. An industry-wide railroad strike, or a series of strikes against individual roads, could result in diversion of some business to other modes of transportation.

Quarterly Indexes of Spot Prices of Railroad Fuel, Material and Supplies*

(Average mid-year 1947-1949 = 100)

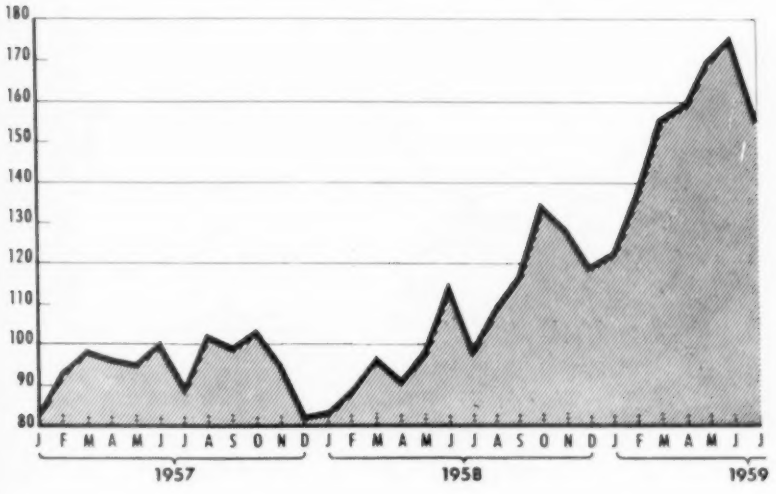
	July 1958	Oct. 1958	Jan. 1959	Apr. 1959	July 1959
Fuel	112.7	116.8	121.7	124.7	116.7
Forest products	126.2	127.4	128.4	132.8	134.7
Iron & steel products	185.6	191.1	192.2	192.2	192.2
Miscellaneous products	133.1	133.6	134.4	136.8	137.2
Total, excl. fuel	152.9	155.4	156.3	158.1	158.4
Total, incl. fuel	138.7	141.6	143.9	146.0	143.7

*Source: Bureau of Railway Economics, Association of American Railroads.

Reach 36 Million Next Year

Piggyback Carloadings

Average Weekly
1957-1958 = 100



Part of that traffic probably wouldn't get back on the rails for a long time—some of it might never return.

High traffic levels, of course, will create need for increased purchases of materials, supplies, fuel and new equipment.

In 1958, at this time of year, the railroads, by and large, were living out of inventory. Purchases were running at a monthly rate of about $95 million. Inventories, while on their way down, were at the $630 million level. (They were to decline, eventually, to well below the $600 million mark.) Since the first of this year, inventories have begun to climb a bit, but they're still far below the levels prevailing in 1957. Expenditures for materials, supplies and fuel during the first six months of 1959 have averaged about $130 million monthly. As soon as the steel strike is over, therefore, it is a reasonable assumption that inventories will begin to rise again.

In spite of this buying for inventory, it is now highly unlikely that purchases in 1959 will go much above the $1.6-1.7 billion level. With capital expenditures of about $1 billion, railroad spending in these two areas in 1959 probably will total about $2.7 billion.

Preliminary estimates indicate that this figure will be topped in 1960 by purchases of material and supplies running close to $2 billion, and capital expenditures of about $1.1 billion. Such predictions must be more tentative than usual this year because of uncertainty about when the steel strike will end. If the Steelworkers are back at work by the first of October, the predictions should hold up.

If railroads are going to spend $3 billion or more in 1960 on their shopping, what can they be expected to buy? It's almost a certainty that once again they'll be out after sizeable numbers of new freight cars. Expected increases in piggyback traffic alone should put the carriers in the market for a large number of flat cars, perhaps as many as 3,000 if auto piggybacking really catches on. (Still, more cars for piggyback service probably will be ordered, by railroads and others, if the Interstate Commerce Commission approves some of the Plan III and IV rates it now has under investigation.)

Overall, probably 80,000 freight cars will be sought by the railroads themselves, not including orders by carrier-owned refrigerator car lines and by other private lines. Passenger car orders probably will be confined mainly to rapid transit equipment ordered by the several cities which furnish such service to their residents. New York, for example, may be in the market for up to 540 new subway cars, in addition to 230 recently ordered.

There should be considerable activity in the locomotive field next year also. A lot of power will be upgraded and many new locomotives ordered. Altogether, we estimate that about 1,100 locomotive units will be upgraded or replaced with new power.

In addition, railroads should be in the market for, among other things:

- several thousand trailers for their piggyback services;
- about $25 million worth of maintenance-of-way work equipment;
- 1,200-1,500 miles of centralized traffic control;
- equipment for several new or rebuilt retarder yards;
- 1,000-1,200 mobile radio units; and about
- 1,000 units of carrier communication equipment.

The prices railroads pay for the materials and supplies they use will be on the increase in the year ahead. In July 1958, average spot prices of railroad materials, supplies and fuel reached their lowest level since October 1956. Since then, they've generally been on the increase. In the year between July 1958 and the same date in 1959 these prices rose by 3.6%. (See the accompanying table.)

The magnitude of the price increases in the year ahead will depend largely on the wage agreements made between the Steelworkers and their employers, and any subsequent price action taken by steel makers. However, it is safe to assume that the prices of such things as building materials, many petroleum products, and electrical materials, will show substantial increases during the year ahead.

RAILROADS HAVE MINUTEMEN TOO...

These modern minutemen are listed on the opposite page. Like their counterparts in American history, they are vigilant and prepared for timely, concerted action whenever the occasion arises.

All are members of the Railway Progress Institute.

Through the Institute, they are cooperating in a dynamic program dedicated to the progress and prosperity of the railroad industry.

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They have demonstrated their ability and their effect. They have rallied many allies, including other railway suppliers, to the cause of the railroads. They have given voice to their support in testimony before committees of the Congress. They have cooperatively studied such significant railway subjects as passenger traffic, executive development and equipment financing; and they have shared their findings with railway officers.

These are the railroads' minutemen.

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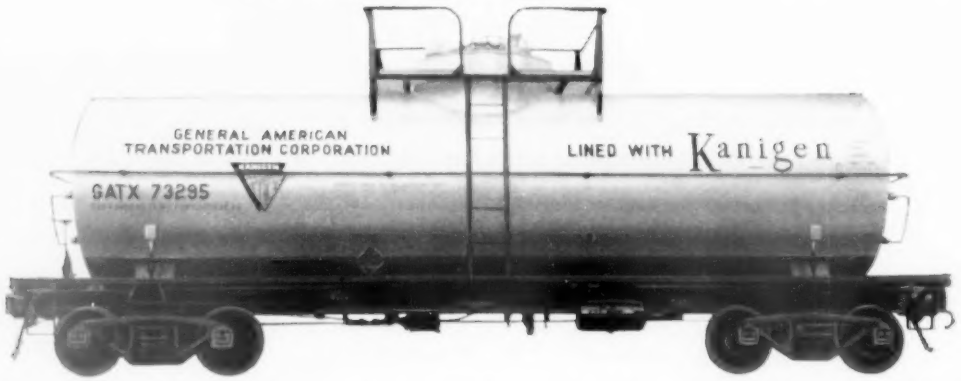

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Communications Will Expand

By ROBERT W. McKNIGHT
Signal and Communications Editor

Spending for communications in 1960 by 23 railroads is estimated at $8,083,725, according to a Railway Age survey. Of the roads reporting, 52% plan to spend more money next year on communications than they will in 1959. Only 16% plan to spend less, while the remaining 32% plan to spend about the same.

Major work to be undertaken by railroads next year includes pole line rebuilding, installation of carrier for more telephone and printer circuits, and additions to radio systems.

The Delaware & Hudson, for example, plans to install wayside base stations along its entire mainline to provide solid train-to-wayside radio coverage. Also included in D&H plans for next year is radio for 30 locomotives. Similarly, the Canadian National plans to install 45 wayside base stations to provide solid point-to-train coverage from Edmonton, Alta., to Vancouver, B. C. These wayside stations will have remote controls whereby the dispatcher, from a division headquarters, can control them over open wire lines. The CNR expects to buy 72 locomotive radios for use in this territory. The Louisville & Nashville plans to install 100 radios on locomotives and cabooses during 1960, as part of its program to provide complete radio communication on moving trains.

Several roads are adding to their yard radio systems, including walkie-talkies and base repeater stations for car inspectors' use. The CNR plans to install radio at four yards. This includes work now under way at Moncton and Montreal, where intercom and paging systems, an automatic telephone exchange and closed circuit television will be installed.

Four railroads have plans before their managements for 1,700 miles of microwave installations, which, if approved, will be started next year. One railroad plans to remove its communication pole line if the microwave is installed. Radio would take the place of phone communications from conventional pole boxes.

The Southern Pacific is planning a 760-mile microwave system from Dunsmuir, Cal., to Los Angeles, with San Francisco as the hub. The plan calls for 180 telephone channels initially, plus a large number of printing telegraph channels. The system will accommodate facsimile, data transmission and other forms of high-speed communications. Some of the voice channels will be used for remote control of wayside radio stations.

The proposed system will be capable of a maximum load of at least 240 voice channels. Four intermediate legs are planned for the section just south of Dunsmuir, to determine the feasibility of completely eliminating the communications physical wire line plant over a 100-mile section of the mainline.

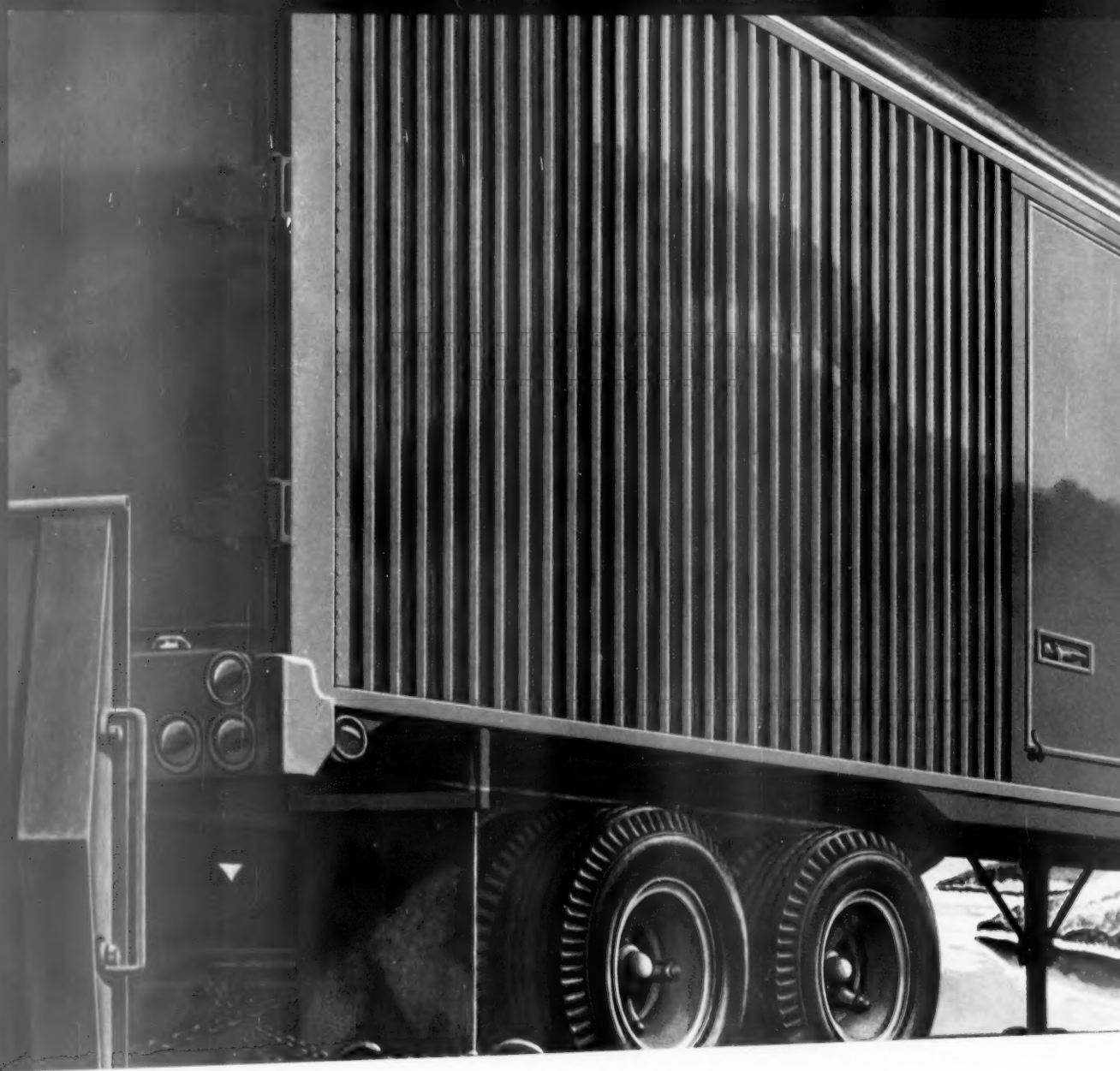
The Denver & Rio Grande Western has announced that it has begun construction of a microwave system from Pueblo and Denver, Colo., to Ogden, Utah. The system may be completed next year. The 700-mile, 21-station microwave system includes eight terminals and 13 repeater stations. The main route of the system is to run from Pueblo, north to Denver; west to Salt Lake City, and north to Ogden. Pueblo, Denver and Ogden are terminals. The five other terminals, at the freighthouse and North Yard in Denver; Grand Junction, Colo.; Provo and Roper Yard, Utah, will be connected by short microwave stub lines. The road plans initially to use 12 channels for voice communications, in addition to high speed facsimile transmission.

Practically all the roads responding to a Railway Age questionnaire indicated that they plan to install more carrier equipment next year to provide voice circuits for telephone service, and printer circuits for car reporting systems. Three roads said they expect to make good progress on car reporting systems next year. The Texas & Pacific will use printing telegraph at 17 points in connection with punch-card-to-tape equipment.

Several roads expect to make further progress on their direct dial telephone systems. The T&P will begin work on such a system next year, using carrier for through trunk circuits. Pacific Great Eastern, which has system-wide microwave, is adding channels for voice and printer. Similarly, the L&N is adding carrier telephone and telegraph between Atlanta and Memphis, 510 miles. Minneapolis & St. Louis plans to install voice carrier equipment and an automatic exchange at Monmouth, Ill., to complete a dial system from Minneapolis to Peoria, Ill.

Questionnaire responses show that many roads plan to install yard loudspeaker systems next year. Some will be in new retarder classification yards, others in new or existing flat switching yards. The L&N, for example, plans to install a loudspeaker system at its Wauhatchie, Tenn., yard. Another railroad is planning to upgrade one of its older freighthouses by installing a centralized checking loudspeaker system.

In short, the communications outlook is good for 1960. More circuits for voice, printer and data transmission is the big demand of railroad managements today. Another strong demand appears to be for complete radio communications on a railroad. Most roads have a great deal of radio equipment, but the need for more continues. The Railway Age survey shows that most roads are upgrading their pole lines, with new wire and improved construction practices.



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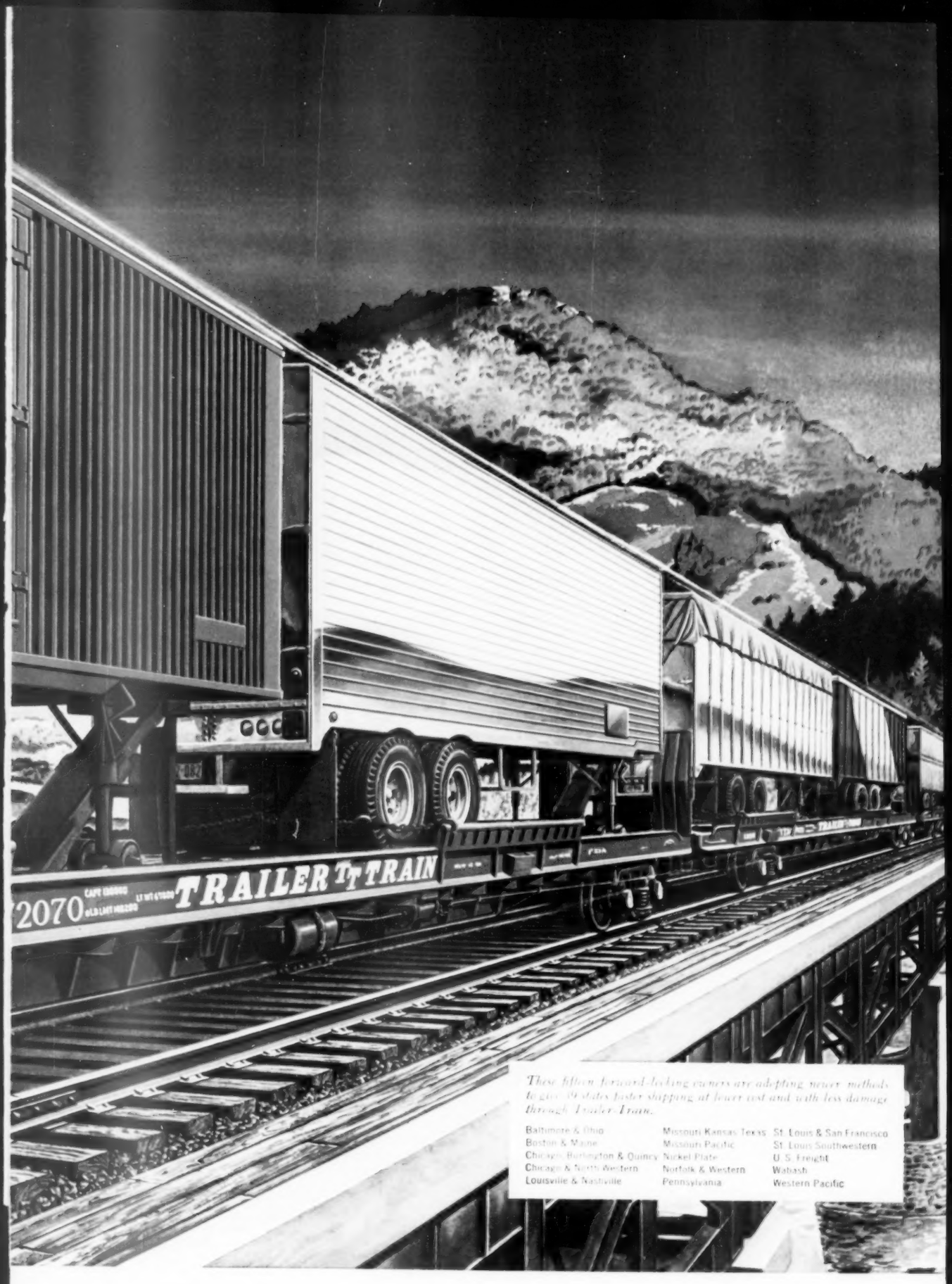
It's a new approach to transportation—a combination of the flexibility of highway trailer service with the economy of rail service.

Trailer-Train owners can promise these record schedules because Trailer-Train equipment is 100% "Roller Freight"—with roller bearings instead of friction bearings on car axles. And over half the bearings on Trailer-Train's 2,000 cars are Timken® *tapered* roller bearings. With Timken bearings to roll the load many of these cars go 168,000 miles a year at high speed without fear of hot boxes and with practically no maintenance. Compare this to average freight car mileage of only 17,000 miles a year at lower speeds on ordinary bearings.

"Roller Freight" cuts time in terminals and the high cost of inspection, too. Because Timken bearings need only a touch for temperature, inspection takes 1/10 the time required by friction bearings. In normal service Timken bearings will go at least 4 years without adding lubricant.

When all freight is "Roller Freight", America's railroads will save more than 24 million dollars by virtually eliminating hot boxes and another 5½ million dollars in lubricants alone. And total savings will come to an estimated $288,000,000 annually in operating and maintenance costs. It's one of the most profitable investments the railroads can make.

NEW PLANT MAKES "ROLLER FREIGHT" MORE PRACTICAL THAN EVER. A new Timken bearing plant for freight car bearings exclusively now makes planned purchases of roller bearings more economical than ever before. And by planning roller bearing purchases the railroads can set up economical shop schedules, cut the cost of going "Roller Freight" still further. Already 86 railroads



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and other freight car owners have over 42,000 Timken bearing-equipped cars in service or on order—2 3 of these in interchange. And more are switching every day to give shippers better service, cut operating and maintenance costs to the bone.

Timken bearings on freight car axles *roll* the load instead of sliding it as friction bearings do. They eliminate the hot box problem—No. 1 cause of freight train delays. And because it takes only a touch to inspect Timken bearings, they cut delays in terminals, too.

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What's the Labor Outlook?

By GUS WELTY
Western Editor

Conference committees started work last week on what may be the most critical series of negotiations ever conducted under the Railway Labor Act.

A strike is possible—but perhaps not yet probable. In any event, there's little chance of a work stoppage before next spring or summer, unless the issues go to mediation and fact-finding more quickly than most observers think likely.

(The non-ops have cited the possibility of a Nov. 1 strike if the railroads contend that moratorium provisions of existing contracts don't expire Oct. 31. Both management and some union people expressed surprise at the moratorium reference, and doubt that a walkout could take place so abruptly.)

Wage negotiations face deadlock. The operating brotherhoods are demanding 12% to 14% increases. The non-ops want 25 cents an hour. Management, in a departure from usual practice, is countering with pay cut proposals. Conference committee talks have begun with three of the organizations: the BLE, ORC&B and SUNA.

The risk of an impasse comes—but it's not inevitable—when management and the ops collide on the feather-bedding issue. No mutually satisfactory solution is, however, yet in sight.

In the past, management efforts to update work rules have been a fire-and-fall-back proposition. From all indications, it will be different this time around.

From the moment AAR President Dan Loomis launched the work rules campaign (last February in St. Louis in an address aptly titled "Year of Decision: Clear Track or Crisis?"), management has had all the better of the psychological in-fighting that labor leaders usually dominate.

- The railroads propose appointment of an impartial presidential commission to study the rules situation and recommend revisions. Union leaders refuse to go along, unless the scope of the study is expanded to an extent that would make any conclusions unlikely.
- Management's campaign to the public, conducted through advertisements signed by "American Railroads," outlines the benefits shippers, travelers and the public generally would gain through rules revision.
- The railroads are buying "service interruption" insurance. The protection (indemnity against fixed charges) is far short of complete coverage—but it should reinforce financially weak carriers against union divide-and-conquer tactics against individual railroads.
- Management is aiming its attack against the rules, not the employees who work by those rules. The union's response generally misses the point. It consists mainly of (a) complete defense of the employee; and (b) diatribe against management.
- Management-labor agreements in Canada haven't done a thing to strengthen the union's hand. Both CPR and CNR won the right to operate without firemen in yard and freight service. QNS&L won agreement on eliminating the rear brakeman and lengthening trainmen's "basic day" mileage. The BLE approved a change in basis of pay (from weight-on-drivers to number of units) on CPR's Eastern Region.
- A few roads—most impressively the IC—are taking the lead in telling the railroad story to the employees and the public. The calm, reasoned presentation of such employee and public relations pieces contrasts sharply with the verbal assault union leaders are making on the carriers and their managers.

Add the psychological edge to the strength of the case the carriers have prepared, and it comes out like this: There's reason to expect some changes in the offing.

Management-labor relations being what they are in the United States—and particularly in the railroad industry—it's unrealistic to expect management can obtain every item in its program in one campaign. But of the five areas where the industry loses $500,000,000 annually because of antiquated rules, three stand out: employment of firemen; methods of computing pay for operating employees; and rigid separation between road and yard work. About 70% of the half-billion dollars charged up to waste-by-rule might be saved here.

The union slant on the rules situation has been one of frantic defense—but it's been a scattershot proposition, rather than a point-by-point answer to management's case. The RLEA, for example, has issued glowing testimonials to the productivity of M/W and shop craft employees—who aren't involved in the fight to update the ops' rules. The carriers' attack on the rules (not on the employees or their unions) has been met with direct union attacks on management.

Specific union rules demands are still indefinite. The ops may show some tendency to demand less in hopes of saving more (although the Firemen's

(Continued on page 88)

CPR Looks at the Record

Canadian Pacific began operating certain yard and road freight assignments without firemen in the summer of 1958, after weathering two strikes by the BLF&E. Here's the road's own report of its operational experience since then:

"During the period June 1, 1958, to August 31, 1959, inclusive, the company operated 17,501 diesel yard assignments without firemen and 3,488 diesel freight train assignments without firemen.

"Operation of freight and yard diesels without firemen on Canadian Pacific has been completely satisfactory from every standpoint. Operations have proceeded normally without adverse experience in respect to safety, mechanical performance, carrying out switching operations or any other aspect.

"The experience of Canadian Pacific has fully supported the position taken by operating officers during the dispute with the firemen's union in regard to the firemen-on-diesels issue."

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Legislative Prospects Improve

By WALTER J. TAFT
Washington Editor

Prospects for action on some parts of the railroad industry's legislative program should be better in Congress' 1960 session than they were this year. The outlook seems brightest for income-tax arrangements to provide shorter depreciation terms for railroad rolling stock.

This is a reasonable expectation, despite the fact that the program remains virtually unchanged, and the 1960 session will be a meeting of the same Congress which failed to act on the program this year. Meanwhile, however, railroad Washington representatives have been selling the program on Capitol Hill, and there have been committee hearings at which railroad witnesses have done much educational work.

Moreover, a prominent Congressional leader recently called for prompt enactment of whatever new legislation is needed to help solve railroad problems. The call came from the chairman of the Senate's Republican Policy Committee, Senator Bridges of New Hampshire. He was prompted to speak out because he thinks the Transportation Act of 1958 has not accomplished its purpose.

Five Major Proposals

Major proposals of the railroad program call for legislation to provide:

- Diversification, which means more freedom for railroads to operate other modes of transportation.
- Tax relief to permit more realistic depreciation arrangements and allow accumulation of construction reserve funds.
- Repeal of the tax on passenger fares.
- Adequate user charges on publicly provided transport facilities.
- Repeal of the Interstate Commerce Act's so-called agricultural exemptions, which are applicable to motor transportation—or extension of them to all transportation of the exempt commodities.

Informed observers don't expect diversification legislation next year. It's a controversial proposal, assailed by truckers and water carriers as a bid for railroad monopoly. They advance the appealing argument, refuted by the railroads, that the desired coordination could be achieved by joint-rate and through-route arrangements.

The ICC is "neutral," because it considers the issue one of "broad Congressional policy." One Washington representative of the railroads has said his principals convince him that the diversification proposal is sound, but "they don't tell me how to sell it."

Proposals like diversification often take several years to get through Congress—but many of them eventually get passed. That was the case with repeal of land-grant rates and with the Bulwinkle Act, which gives anti-trust immunity to carrier rate procedures approved by the ICC. Shipper support finally pushed these through, and it may be won for diversification.

Moreover, there is hope that the cause may be advanced by transportation studies which the Senate's Interstate Commerce Committee has under way. These are the studies called for by Senate Resolution 29, and they include an inquiry on "ownership of one form of transportation by another."

The tax-relief proposal to provide more realistic depreciation and replacement arrangements is a three-part proposition. It calls for maximum depreciable lives of 15 years for railroad rolling stock and 20 years for fixed property; deduction from taxable income of amounts accumulated in construction reserve funds; and authority to write-off, at replacement time, the difference between the depreciation reserve on the property being retired and the cost of the replacement unit.

The relatively bright prospects for a 15-year depreciation term for rolling stock arise from the fact that the railroads' need for such arrangements can be sold as a "special case." It is favored by the ICC, as is the 20-year term for fixed property.

The latter, however, is not apt to come, except as part of general relief applicable to all industry in like situations. The same is true of the construction-reserve proposal and the replacement-cost adjustment. Government revenue considerations, of course, are to the fore when Congress considers proposals like these.

Such considerations kept the freight tax in effect for many years (until August 1, 1958), despite pressure of the repeal drive which had widespread support. And they have prevented repeal of the fare tax, already scheduled to be cut from 10% to 5%.

The cut is apt to stick. It's popular, and it will take new legislation to prevent it. Elimination of the 5% levy which will remain does not seem to be in the cards for 1960.

No user-charge legislation is expected next year, but there is hope that this proposal, like diversification, may win support as a result of the S. Res. 29 studies. They include an inquiry on "federal policy dealing with government assistance provided the various forms of transportation and the desirability of a system of user charges to be assessed against those using such facilities."

Easier to Sell

The proposal to extend the agricultural exemption to railroads and water carriers, if the repeal proposal is rejected, was advanced by the railroads for the first time this year. It should be easier to sell than a repealer of the present exemption, and the railroads may start pushing it next year.

In addition to the foregoing, which have been given priority, the whole railroad legislative program covers many other things. These now include a call for extension to railroads of the so-called bulk-commodity exemption applicable to water carriers. This exempts from regulation the water transportation of commodities in bulk—"when the cargo space of the vessel . . . is being used for the carrying of not more than three such commodities."

The present railroad position is a new one, the industry's previous position having called for repeal of the present exemption. As in the case of the agricultural exemption applicable to truckers, the extension-to-railroads idea might be easier to sell than a repeal proposal.

Remaining also on the legislative program, or course, are such perennials as repeal of the Interstate Commerce Act's Section 4, with its long-and-short-haul clause, applicable to railroads and water carriers, and repeal or extension to other carriers of the commodities clause, which forbids railroads from transporting commodities (except their own supplies) in which they have any interest. These have been dormant in recent years, but would be revived if developments indicated that they might be progressed.

From shipper interests, the 1960

(*Continued on page 70*)

M/W Men See Good Year Ahead

NEXT YEAR will see further expansion in the use of butt-welded rail. This view shows an Austin-Western hydraulic crane laying continuous rail on the Seaboard Air Line.

By M. H. DICK

Engineering Editor

Railroad maintenance-of-way officers are tentatively planning 1960 maintenance programs at least as large as those originally contemplated for 1959.

And, in view of the cut-backs brought about by the steel strike, the plans for next year call for a substantially larger amount of work than is being done in 1959.

To bring this situation into perspective it is necessary to review briefly the major trends of the past two years. Last year, the recession cut deeply into maintenance allotments, causing rail and tie renewals to sink into new low territory. However, it must be noted that 1958 purchases of M/W machinery held very close to the high levels of recent prior years.

When budgets for 1959 were being prepared near the close of last year, railroad business was on the upgrade and it was apparent that further substantial improvement could be expected in 1959. Consequently, maintenance budgets for this year were beefed up substantially. Plans were made to lay considerably more rail, to insert a greatly increased number of ties, and to do more ballasting, surfacing and other types of property maintenance work.

Then Came the Strike

On most roads, this year's working season got under way on schedule and was proceeding at a fast clip when the steel workers struck on July 14. That many roads have since curtailed their maintenance activities is common knowledge. Rail-laying, tie-renewal, surfacing and other types of work have been cut back in varying degrees on different roads. Consequently, the total amount of maintenance work to be done this year will be less than originally contemplated.

However, the impression gained from M/W men is that the cut-backs have not been nearly as serious overall as might be indicated by news items in the daily press. In fact, here and there a road will be found that has made no reductions whatever in its programmed work. From these observations this conclusion appears warranted:

While the total amount of maintenance work done this year will be less than that originally budgeted, it will be substantially greater than the work done in 1958.

The foregoing review provides a background against which the prospects for 1960 can be considered. When the question, "How much work do you plan to do in 1960?" was put to a number of top maintenance officers, the answer was almost invariably along these lines:

"Tentatively we're planning to budget about the same amount of work for next year as we had contemplated in 1959." However, more than half of those interviewed amplified this statement by adding that they were planning increases in various categories of work.

In not a single case was it indicated that less work is planned for 1960 than was budgeted in 1959. The logic of the situation is certainly in favor of a fairly high level of activity next year. Maintenance programs as projected for this year were none too ample, particularly in view of the accumulation of deferred maintenance from 1958 and prior years. That circumstances have prevented these programs from being carried out in full has had the effect of enhancing the need for larger programs next year and in the future.

There is, however, a large imponderable facing maintenance men as they look forward to 1960. That is the outcome of the demands of the non-operating unions for a wage increase of 25 cents an hour plus other benefits. What this could mean to M/W departments was brought out by a top maintenance officer of a large road. He figures that such an increase would be equivalent to adding more than 500 men to the payroll of his department.

Equipment Makers Optimistic

Thus, any wage increase would only have the effect of stimulating the railroads in their efforts to put greater efficiency into their maintenance of way and structures activities. This is why manufacturers of work equipment are looking forward to another good year in 1960. Even though a number of roads have asked that delivery of machines be withheld for the time being because of the steel strike, most manufacturers report that their business has been very good this year and they expect it to be equally good next year.

On the railroads and in the drafting rooms of the manufacturers major efforts are being made to develop more efficient machines for railroad maintenance. Many people are convinced that much further progress can be made in reducing manpower requirements. This activity is concerned both with track-maintenance equipment and equipment used in the maintenance and repair of bridges and buildings. Mechanization in the latter field has not developed as rapidly as in track maintenance, and many feel that railroads are just beginning to reap the benefits of machine power in this area.

The railroads can also be expected to continue their efforts to reduce labor requirements by minimizing the amount of necessary maintenance. This effort has many aspects. The one that stands out most prominently today is the trend to welded rail, not only in continuous lengths but also in double and triple lengths.

The probability is that more rail will be welded in 1960 than in any previous year.

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Here is a new Trailmobile especially designed for punishing piggy-back service. Featuring Trailmobile's famous Integral Post construction, it is ideally suited to withstand the impacts of normal rail car coupling and the rigors of heavy cargos and city shuttling. And, this extra durability means low maintenance costs and continued good appearance throughout years of profitable service. ■ Despite its great strength, the PB-68 is extremely lightweight... lighter, in fact, than some aluminum units. And its big cargo space means maximum payloads on every trip. ■ The PB-68 is just one of the many design possibilities offered by Trailmobile's CID* concept, which lets you match trailer to your operating conditions. Call your nearest Trailmobile office for full details. *Customer Individualized Design*

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PULLMAN

Signaling to Top $38 Million

By ROBERT J. BARBER
Associate Editor

More than $38 million is scheduled to be invested by 21 railroads on signal projects next year.

Of the 21 railroads responding to a Railway Age questionnaire, seven plan to spend more money on signal construction during 1960 than they did during 1959. Eight roads will spend as much next year as they did this year. Six roads will spend less.

The largest single expenditure planned is the $15,220,000 budgeted by the New York City Transit Authority for modernization of signaling and interlockings on its IRT division. The Authority expects to spend $6.8 million for signaling on the Lexington Avenue line from 86th Street to 125th Street, and $8.2 million on the Broadway-Seventh Avenue lines from 145th Street to 242nd Street, including the 242nd Street yard.

Information revealed by the questionnaire, plus conversations with other railroad men, indicates that 1,500 road-miles of CTC will be installed in 1960. Highway crossing projects should total about 1,500. Interlocking construction, including automatic plants and interlocking consolidations, will continue at a rapid pace. Several retarder classification yards are now under construction, and work on probably six to eight more will begin during 1960. Signal construction next year will equal or surpass that carried out in 1959.

Centralized traffic control installation projects reported in answers to the questionnaire amount to 326 miles. In addition, four railroads said they plan to install CTC next year, but gave no mileages. Several roads are planning to extend present CTC installations. The Baltimore & Ohio, for example, plans to extend its Gilkeson, Pa.-Wheeling, W. Va. CTC, 20 miles north into Glenwood, Pa., near Pittsburgh. Another railroad is going to install over 200 miles of double-track CTC to provide reverse running on either track.

Other CTC projects planned for next year include: (1) consolidating territories; and (2) modernization of existing installations. One road plans to consolidate two CTC installations into one, with controls in a new pushbutton machine. Another road, after taking a look at a 15-year-old CTC installation, is respacing signals and removing some sidings to reflect the change in operating conditions.

At this early date (many roads reported their budgets are not yet complete), the survey shows that railroads expect to install flashing-light signals at 40 highway-railroad grade crossings, and gates and flashers at 34 crossings. In addition, the Frisco plans to install new protection equipment at 20 highway crossings. Similar work is to be undertaken by the Minneapolis & St. Louis at five crossings. The Terminal Railroad in St. Louis is installing gates at eight crossings.

Most of the reporting roads said they are planning to modernize existing protection equipment and install new equipment at heavily traveled crossings. The B&O plans to install flashing-light signals at 20 crossings, and gates with flashing-light signals at 18 highway crossings. The Georgia & Florida, with federal aid, plans to install new equipment at 15 or more crossings.

Several railroads indicated that they plan to install additional hot box detectors during 1960. Although the first installations of such detectors were made where the hot box incidence was high, the trend now appears to be for installations at entrances to yards. Two roads reported that they expect to complete, during the next two years, installations of hot box detectors at approaches to their major classification yards. They have begun the practice of inspecting only those journals that are indicated hot by the detectors. This enables them to inspect trains faster and get them on the road in less time than previously. The reduction in operating expenses, including fewer car inspectors, has paid for the detectors.

Interlockings Modernized

Most railroads responding to the questionnaire indicated that they will continue to modernize interlockings. Several are working towards elimination of mechanical plants. In many instances, roads are replacing existing local control interlockings with automatic plants. The Frisco, for example, plans to modernize and consolidate five interlockings into two. At three locations, the Frisco has plans to install automatic interlockings to replace electro-mechanical plants and levermen. Another road is planning to consolidate three interlockings into one new relay plant. The Denver Union Terminal recently announced plans to install a new pushbutton, route-type interlocking in the terminal area next year.

Although technically feasible for several years, no automatic train operation has been placed in service. However, the New York City Transit Authority expects that a contract will be delivered in 1959 or 1960 for furnishing and installing train control equipment for automatic operation on one track of the Times Square-Grand Central shuttle line of the IRT. The preliminary estimate of the cost is $250,000.

Several retarder classification yards are now under construction. Two roads have indicated they will build new yards next year. The B&O plans to install car retarders at its new Cumberland, Md., yard, and the NYC has announced that it expects to start construction of a new electronic classification yard at Indianapolis. Several other roads are well along with plans for new yards, construction of which should be started in 1960.

SUBSTANTIAL SAVINGS accrue when CTC allows a track to be removed.

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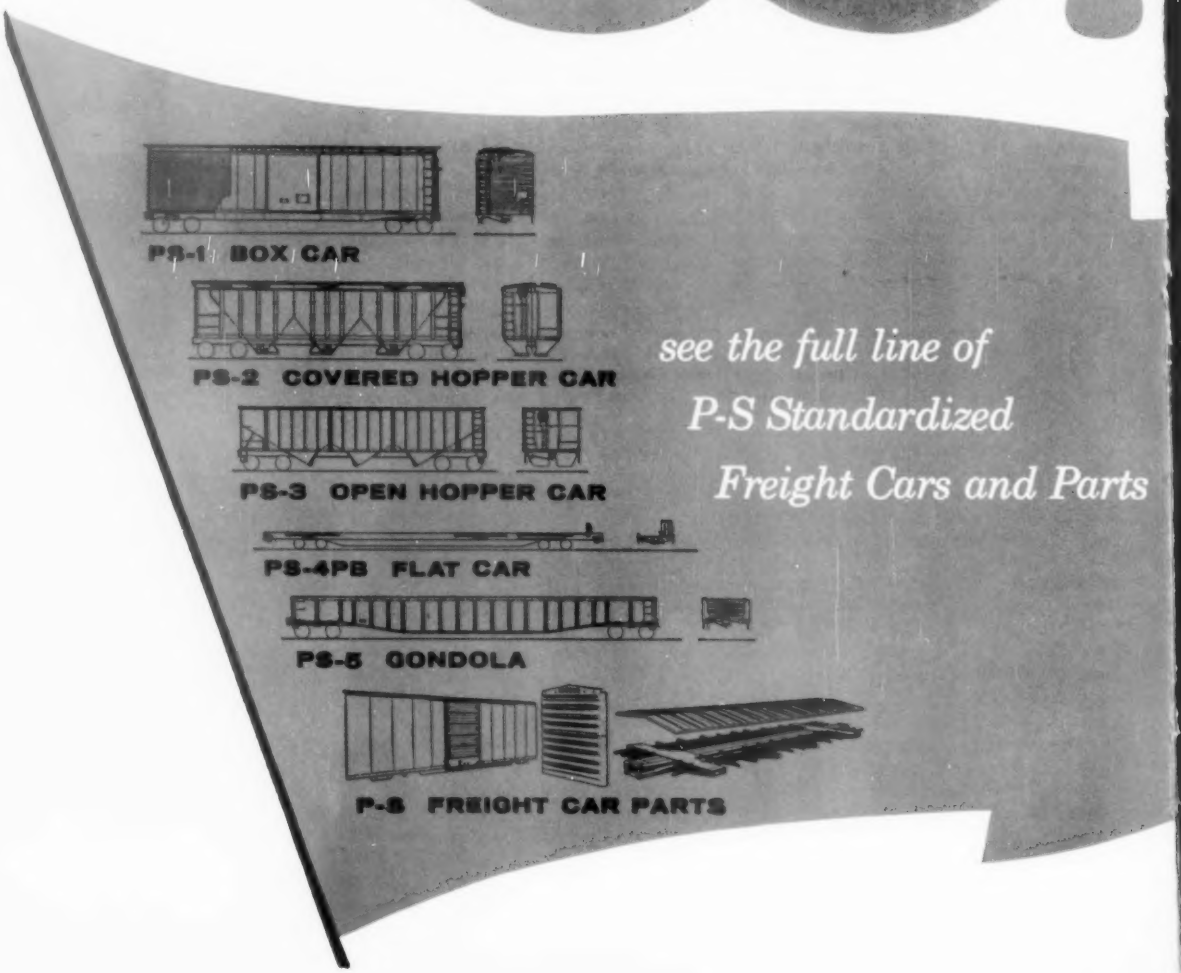

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Too Many Specialists in M/W?

► The Story at a Glance: A chief engineer, speaking before a group of maintenance of way supervisors last week, told of the advances in M/W technology that are making it possible to maintain the properties with greatly decreased manpower. But a railroad president, while acknowledging these advances, expressed the opinion before the same group that the M/W supervisor has not, as a rule, been sufficiently inclined to acquire a broader perspective of the railroads' overall problems.

The men who have the responsibility of maintaining the fixed properties of the nation's railroads have made great progress in reducing the cost of such work.

But they "have tended too much to become specialists," and there is a need for these men to "broaden themselves to see their work not as a final objective in itself, but in the broad perspective of where the railroads are going and how they can best improve their position in this era of rapid change."

These two points were made last week by the two principal speakers at a joint session of the Roadmasters' and Maintenance of Way Association and the American Railway Bridge & Building Association. The meeting took place at the Conrad Hilton Hotel, Chicago.

The speaker who told of progress in reducing costs was C. J. Henry, chief engineer of the Pennsylvania, whose subject was "How to Cope with Railroad Maintenance Problems." D. J. Russell, president of the Southern Pacific, speaking on "The Supervisor's Role in the Future of Railroads," was the speaker who advised the broadening procedure for M/W supervisors.

Mr. Henry's approach to his subject was to describe the methods being used by the PRR to reduce M/W costs. The procedure, he said, has been to experiment with mechanization on a local basis to determine the possible savings. As the first step, a few extra gangs engaged in track work were equipped with modern machines representing an investment per gang of $200,000.

"The results," he said, "were satisfactory. For example, in one district in 1952, 72 miles of track were worked with 975,000 man-hours using the old, conventional methods. In 1957 the same territory was worked by mechanized equipment using 420,000 man-hours, or a reduction in man-hours of about 56 per cent. The quality of the work was better, for each and every tie was given the same uniform tamping."

Based on these trials, explained Mr. Henry, the road decided to adopt the cycle maintenance principle and to expand it to system proportions as fast as money for machines and equipment became available. "This means tie renewals are made on a six-year cycle and intermediate surface lifts made every two to three years as traffic conditions may require." Each district or operating division, he said, is now equipped with a heavy maintenance gang, two surface lift gangs, three spot-surfacing gangs, two work-train gangs, two road-crossing gangs, and three "skirmish" gangs.

The new system, said Mr. Henry, takes the place of the "time-honored method of performing track work with section and extra gangs." He added that the responsibilities of the former section foremen are taken over by the supervisor of track, aided by the required number of track patrolmen, who have the qualifications of a foreman-track and are compensated at that rate.

"The bridge and building department has also been the subject of extensive study, and we now have one region completely mechanized," stated the speaker. This department, he explained, will be revamped system-wide as fast as equipment can be financed.

In its cost-saving program the Pennsylvania, said Mr. Henry, has taken these additional steps:

- Set up a system for the rapid accumulation and dissemination of work and cost data, using IBM machines.
- Established a system for the detailed programming of track and bridge and building work.
- Following-up track inspections four times a year, with a machine and a formula being used to grade each subdivision each trip.

Mr. Russell acknowledged the progress made in mechanization of M/W work, but went on to say that the "new era in maintenance-of-way technological practices must be matched with progress in supervisory practices." He advised supervisors to maintain an attitude of constant alertness, and "to develop the habit of looking at every detail of the work, not just from the viewpoint of whether it meets the established standards, but with these more important and ever-present questions in your mind: Why must the job be done this particular way, and is there a better way to do it?"

"The amazing new machines," said Mr. Russell, "demand of the supervisor a new degree of administrative skill in planning and scheduling the work." Because supervisors have the problem of developing operators of new and complicated equipment, "this new era requires a new degree of leadership and a new depth of human understanding." He feels that from this group "will come the competent supervisors of the future," and that encouraging them to express ideas "is one of your main opportunities to develop these people."

At this point Mr. Russell made his statement about over-specialization among M/W supervisors. His impression is that "most supervisors, com-

(Continued on page 48)

D. J. RUSSELL
Southern Pacific

Featured At Last Week's Engineering Meetings

C. J. HENRY
Pennsylvania

F. R. WOOLFORD
Western Pacific

C. E. NEAL
Northwestern Pacific

M. H. DICK
Railway Age

Diesel Motor Cars Arrive in Mexico

Five diesel motor cars, built by Fiat in Italy, have been shipped from Genoa to Mexico. All transportation was arranged by American Union Transport, Inc. The cars are being used to provide new, fast National Railways of Mexico service between Mexico City and San Luis Potosi. They are electro-mechanically air conditioned, feature reserved reclining seats, buffet and bar services. (RA, Sept. 7, p. 46.)

'58: Good Railroad Safety Year

With passenger fatalities on railroads only about half the number on buses and airlines, 1958 was one of the better rail safety years. Transportation officials attending the 40th presentation of the American Museum of Safety's E. H. Harriman Memorial Awards were given the facts to support this statement by James G. Lyne, chairman of the Harriman Awards Committee and editor of Railway Age.

Sixty passenger fatalities occurred on Class I railroads in 1958, Mr. Lyne said, as compared with 114 on domestic air lines and 120 on buses.

Three-fourths of the railroad fatalities were accounted for by a single accident in which a train went through an open drawbridge, Mr. Lyne noted. Of the remaining 16 passenger deaths, "10 were passengers attempting to board or alight from moving trains—acts over which the railroads have little or no control," he added.

Mr. Lyne described last year's safety record as a highlight in the railroads' long-term safety improvement. "The extent of railroad progress in the field of safety is indicated," he said, "in the fact that casualties of all kinds in 1958 were about a sixth of what they averaged in the '20's . . . Even allowing for the difference in reporting accidents, the trend is clear: railroads are succeeding in their continuing efforts to improve their impressive safety record."

Gold medal awards for the best overall safety records in 1958 went to the Union Pacific, Cotton Belt and New York, Susquehanna & Western (RA, Sept. 14, p. 50). Eleven other roads received certificates of Commendation for setting the best safety records in their respective regional and size groupings.

Weyerhaeuser to Buy Oregon Line from SP

Southern Pacific and Weyerhaeuser Timber Company have reached an agreement for the sale to Weyerhaeuser of 10½ miles of SP branch line in Oregon. The trackage, part of SP's Marcola Branch, links Hendricks and Hyland, northeast of Springfield and Eugene, Ore.

Under the agreement, SP will sell the line for $167,500 and lease back common carrier operating rights.

SP has filed application with the ICC for the approval of the sale and authority to use the property under the lease agreement.

TOO MANY SPECIALISTS?

(Continued from page 47)

petent as they may be in the job immediately at hand, have not been sufficiently inclined to expand their interests and understanding into . . . other fields." He believes this is "just about as true for the college-trained engineer as it is for those who have developed themselves without college training. All too many college engineers tend to concentrate on engineering matters."

Mr. Russell then described how his road has dealt with this problem by an educational program under which "some 75 to 80 of our officers, supervisors and prospective supervisors are being selected each year for enrollment in various colleges and universities." Started in 1950, this program was substantially enlarged in 1956 "reaching down through middle management and supervisory levels, and even including some of our carefully selected younger rank-and-file people who had shown unusual ability."

"In this entire program," declared Mr. Russell, "except for the technical engineering courses, the major emphasis is on gaining skill in *decision* making in the vast range of management problems that call for breadth of knowledge and understanding far beyond the limits of the slide rule or the exact science of calculus."

He stated emphatically that "one of the most pressing problems of our industry today is to find able candidates to step into higher positions as they become open. We simply don't have nearly enough of the kind of men who have acquired the breadth and judgment and the flexibility and foresight required, ready to move on up the line."

Following the joint session at which these addresses were delivered the two associations held three days of separate sessions that were devoted primarily to the presentation of committee reports. Concurrently a large display of materials, devices and machines used in the maintenance of tracks, bridges and buildings was on view at the Coliseum. Sponsor of the exhibit was the Association of Track and Structure Suppliers.

F. R. Woolford, chief engineer, Western Pacific, brought greetings from the American Railway Engineering Association, of which he is president.

Presiding officers were C. E. Neal, president of the Roadmasters' Association and division engineer, Northwestern Pacific; and M. H. Dick, president of the Bridge and Building Association and engineering editor, Railway Age.

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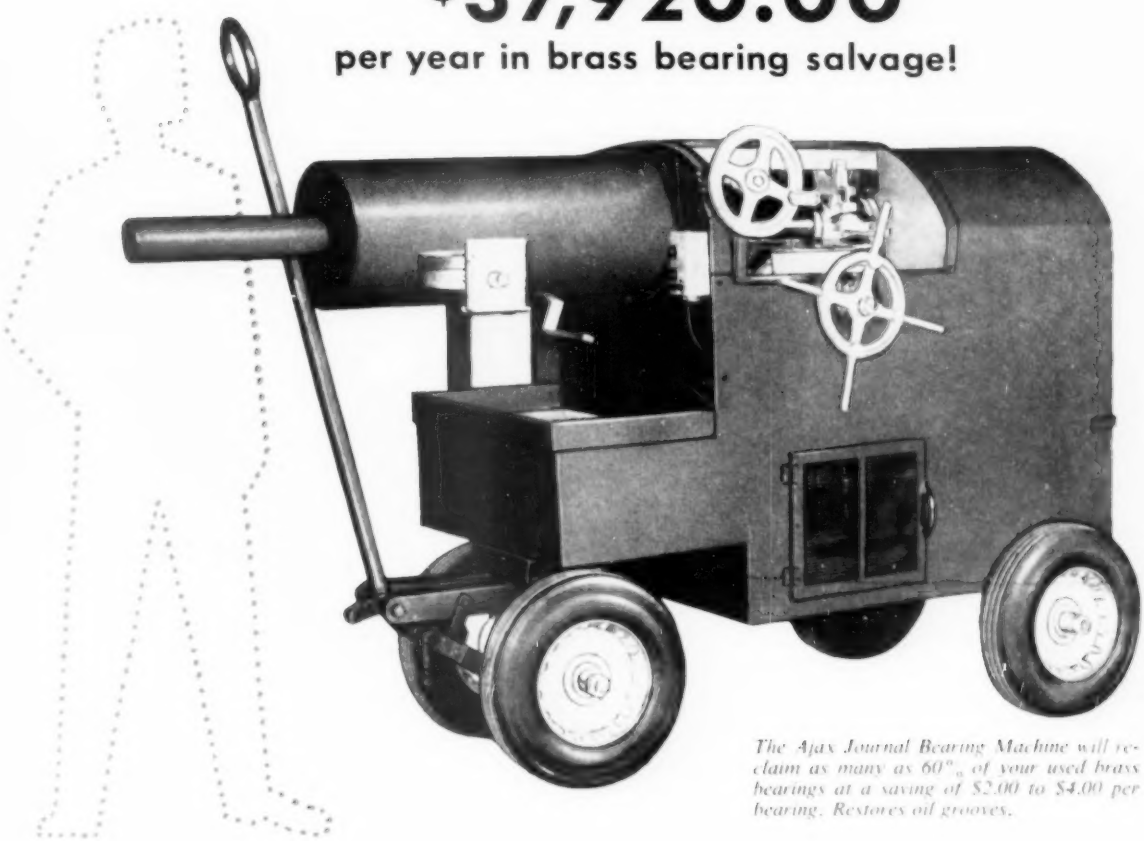

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Dropped brake beams are eliminated and burned off journals are reduced.

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Linkages move with axle motions to prevent taper wear. Frate-Brakes last longer.

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Light-weight cylinders mounted on trucks are easier to service. Direct linkage eliminates slack adjusting.

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Complete Frate-Brake mechanism is mounted on truck. No design worries on car bodies because of brake cylinders, levers, guides and rods.

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Frate-Brakes, acting on axle-mounted discs, exert no wheel-spreading force. Give longer bearing life, fewer hot boxes.

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Frate-Brakes don't interfere with normal truck and wheel play. No special brackets or other equipment are necessary.

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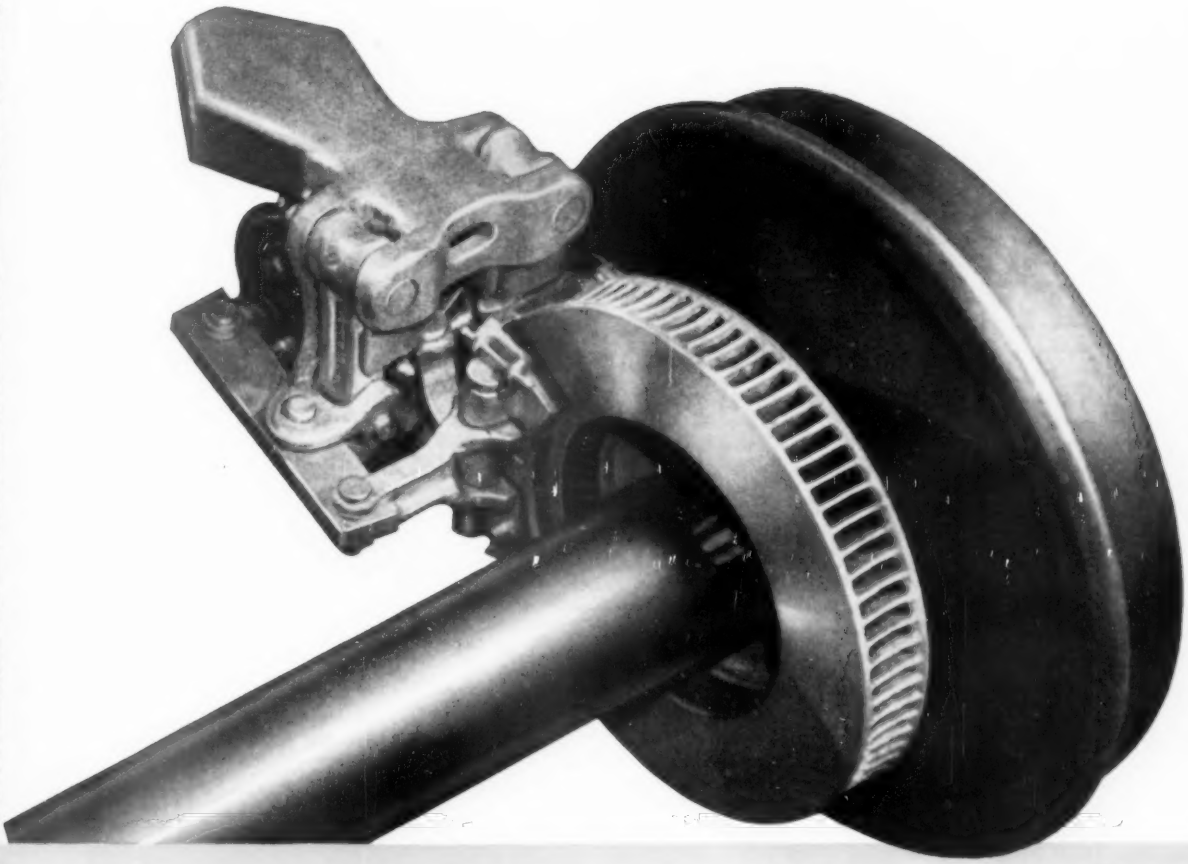

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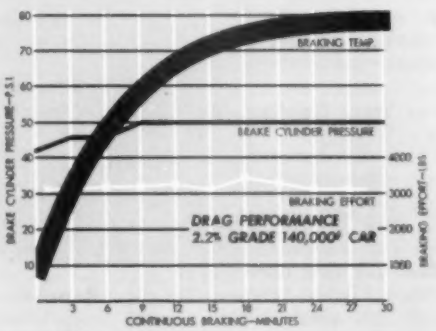
Even after 30 minutes of steady braking pressure on a 2.2% downgrade with a 140,000-pound load, Frate-Brake doesn't overheat. Note that brake cylinder pressure doesn't have to be cycled to let the brakes and wheels cool.



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RAILWAY DIVISION

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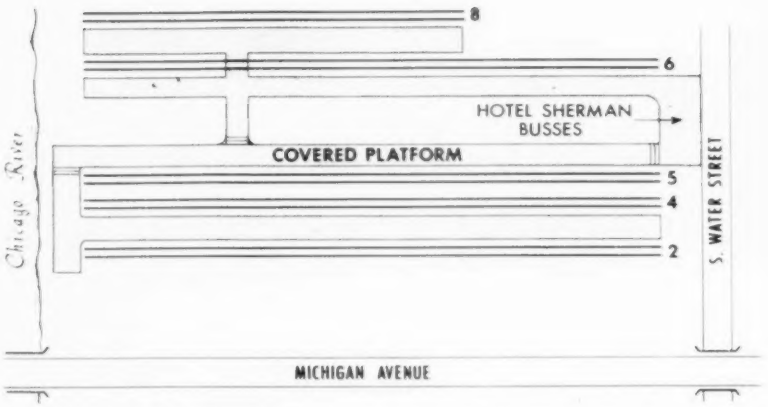
In Chicago: New Rail Equipment

The largest collection of new railroad equipment exhibited in Chicago since the 1948 Railroad Fair goes on display this week. The exhibits—at the Hotel Sherman and at the IC north of the Prudential Building—were scheduled to open Sept. 20 for a special preview showing. During the Coordinated Mechanical Association meetings Monday, Tuesday and Wednesday, the displays will be open from 9 a.m. until 5 p.m.

For the Allied Railway Supply Association, this will be the first track exhibit ever held in Chicago in conjunction with the railroad associations' meetings. Leading railway supply companies and divisions will have space at the track show. Here are the new products they'll be exhibiting:



SUPPLIERS WILL EXHIBIT new cars and new devices on tracks shown in this diagram as well as on two extra tracks made necessary by the heavy demand.

Aeroquip Corporation—Parking area between Tracks 5 and 6
- Mobile automatic fueling demonstrator unit.

Aluminum Company of Canada, Ltd.—Track 9
- Aluminum CNR refrigerator car and Roberval & Saguenay box car and open-top hopper car.

American Car & Foundry Division—Track 4
- "Ship-O-Matic" hopper car equipped for pneumatic unloading of dry cargo.
- 70-ton premium open hopper.
- 85-ft piggyback flat car equipped with four ACF hitches to permit loading of either three 27-ft trailers or two 40-ft trailers.

American Steel Foundries—Track 2
- 1,000,000th ASF Ride Control truck.
- 50-ton Ride Control truck with Roto-Frate brake (bolster mounted).
- 90-ton Ride Control truck with Simplex clasp brake.
- Truck with Simplex Rotor brake for high-speed equipment.

Brandon Equipment Company—Track 7
- Santa Fe flat car equipped with Brandon WK-1 trailer securing device.
- Semi-portable steel ramp used in conjunction with General American G-85 car (on exhibition at General American space).

Buffalo Brake Beam—Unit Truck Corporation—Tracks 5 and 6
- New York Central Flexi-Van flat car and Baltimore & Ohio box car equipped with Buffalo's Single Disc Brake-X.

Evans Products Company—Track 5
- Rock Island insulated DF car. Special exhibit inside the car will feature Evans aluminum belt rails and crossmembers for use in truck trailers in piggyback service.

Ford Carliner Division — Ford Grain Door Division—Track 5
- Two cars, one equipped with grain door, Ford extension bands and Ford cross-tie assembly; the other outfitted with Steel-Corr car liner.

General American Transportation Corporation—Tracks 4 and 6
- G-85 piggyback flat car.
- Dry-Flo covered hopper car.
- Kanigen-lined tank car.
- 20,000-gallon tank car.
- Mechanical refrigerator car.

General Steel Castings Corporation—Track 7
- Composite underframe including cast steel underframe ends for box car (exhibit will be mounted on PRR flat car built 25 years ago and incorporating GSC one-piece cast steel underframe).
- Illinois Central bulkhead flat car with cast steel underframe and interlocking upright ends.

Maclean-Fogg Nut Company—Track 2
- Rebuilt freight car emphasizing application of partial steel interior lining using the "M-F" continuous bar anchor.

Midland Resin—Track 2
- Santa Fe MTC refrigerator car equipped with the Espey Car Liner.

Pacific Car & Foundry Company—Track 5
- Southern Pacific RBL car with Car-Pac lading protection devices and Hydra-Cushion underframe.

Pullman-Standard Division—Track 6
- PS-1 50-ft, 6-in. standardized box car.
- PS-2 3,215-cu ft covered hopper car.
- PS-3 70-ton open-top hopper car.
- PS-4PB 85-ft piggyback flat car.
- Lading protection devices, parts and specialties.

Pullman-Standard Division—Trailmobile Inc.—Track 6
- 75-ft flat car equipped with cushion underframe. Trailmobile container and highway trailer will be mounted on the car. Car-straddling crane will demonstrate loading-unloading operations.

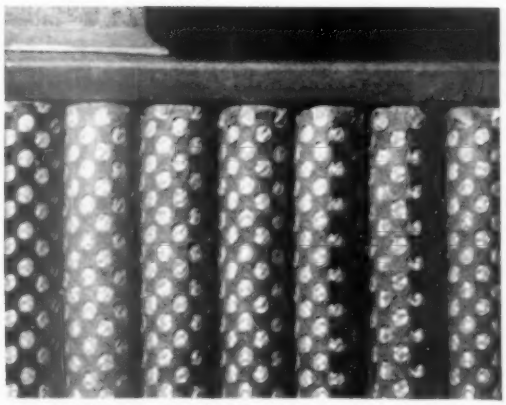
Republic Steel, Berger Division—Track 9
- Erie freight car equipped with Republic car flooring. Car has been in service one year.

(Continued on page 110)

New Exide-Ironclad Carlighting Battery

SAVE UP TO 616 LB. PER CAR

-- or boost power 25%



Here's the secret. The new, improved tubular positive plate. Active material is held securely in fine mesh, braided glass tubing encased in plastic armor. Boosts battery performance . . . extends life. Exide introduced the tubular positive plate battery 50 years ago. Has constantly improved it ever since. No other battery design has ever been able to match it for heavy duty service.

Out of Exide research now comes the biggest advance in carlighting battery design ever made. Exide engineers found the way to use battery materials even more efficiently. Now you can get the same battery capacity at a weight saving of up to 616 lb., or you can boost capacity within the same size battery compartment as much as 25%.

Either way, you achieve significant cost savings too. Because this new, more efficient, Exide-Ironclad can be priced approximately 8% lower per amp-hr. And its new construction means longer life potential . . . extra years of battery use for every dollar invested.

Write for complete information. Also ask about the new, portable chargers for station use. Exide Industrial Division, The Electric Storage Battery Company, Phila. 20, Pa.

Exide®

THE ELECTRIC STORAGE BATTERY COMPANY

Burlington fast freight with new red, white and gray styling is a spectacular sight as it heads west on its 23-hour, 1000 mile run from Chicago to Denver. New General Motors 2400 hp turbo-charged SD-24 Diesels are the most powerful freight units built by Electro-Motive.

Sixteen of the powerful new Diesels have been purchased by the Burlington for fast, heavy tonnage hauls. The SD-24 was specially designed for this type work—its low axle loading and high tractive effort provide rapid acceleration and ability to maintain high constant speeds.

New Turbo-charged Diesels Speed Burlington Freight

Four General Motors 2400 hp SD-24's do the work of five road units

On the Burlington's accelerated freight service between Chicago and Denver, four new 2400 hp turbo-charged Diesels are bettering the work of five 1750 hp road units. Eliminating one unit is a savings, but swing aboard this daily fast freight and watch how these new General Motors Diesels effect other savings.

1000 miles, 23 hours. To accomplish the fast run with a long train, the Burlington needed plenty of power. With the new four-unit consist, there's a far better showing of acceleration and ability to maintain constant high speed than with the previous five-unit consist.

No fuel stops. Though horsepower is up, fuel consumption is down. The Electro-Motive designed turbo-charger, plus a new needle valve injector, cuts specific fuel consumption substantially (9% lower than the former units). Fuel savings, plus a larger fuel capacity, make it unnecessary to stop for refueling during the 1,000 mile Chicago to Denver trip.

Lower maintenance. Unit elimination cuts maintenance hours considerably, but more than that, the new SD-24's—like all the new General Motors locomotives—contain more than thirty maintenance-reduction items. Scheduled man-hours of maintenance have been reduced at least 60 per cent.

Power for the future. The new turbo-charged SD-24 and GP-20 locomotives provide railroads with power to match present accelerated freight schedules with a minimum number of units. Their increased capacity permits scheduling *now* of future plans for even higher ton-miles per trainhour.

See your Electro-Motive representative. He can give you details on any of the great new General Motors higher capacity, lower maintenance locomotives. He can also tell you how you can have the advantages of these new Diesels at less than new unit cost through Electro-Motive's expanded Locomotive Renewal Program.

The SD-24 is equipped with the new General Motors 567D-3 turbo-charged engine which maintains maximum engine output over a wide range of altitudes. First to use the new SD-24, the Burlington was first in the United States to introduce the Diesel-powered streamlined passenger train, the Pioneer Zephyr, also powered by Electro-Motive, 25 years ago.

ELECTRO-MOTIVE DIVISION
GENERAL MOTORS · LA GRANGE, ILLINOIS
Home of the Diesel Locomotive
In Canada: General Motors Diesel Limited, London, Ontario

GENERAL MOTORS LOCOMOTIVES

Now is the time for a giant stride in motive power . . .

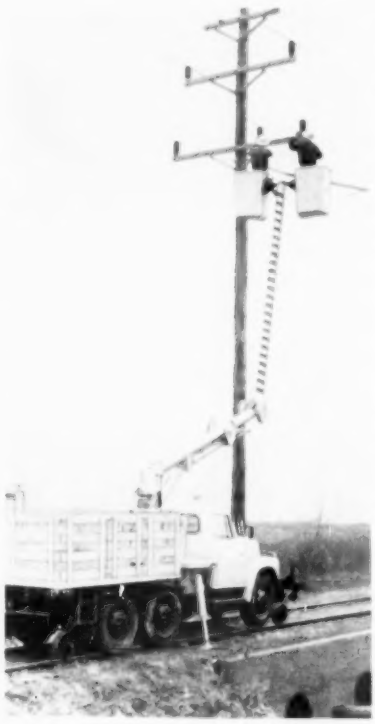
1800 hp General Purpose GP 18 | 1800 hp Special Duty SD 18 | 2000 hp General Purpose GP 20 | 2400 hp Special Duty SD 24 | 1325 hp Road Switcher RS 1325

New Products Report

Inverter Unit

A new inverter power unit, "Instapac," is designed specifically to operate in conjunction with an Onan emergency electric plant and an Onan automatic line transfer control, but is adaptable to existing standby equipment in microwave installations. Its purpose is to supply adequate a.c. power to operate the microwave equipment for the brief interval of time required to automatically start the standby plant. Onan engineers claim the new inverter power unit can take over any power load up to 5 kva within 8 to 28 milliseconds, depending on what part of the alternating current line cycle the interruption occurs.

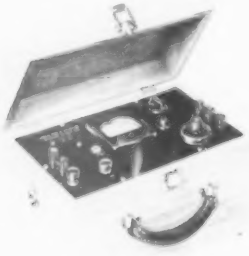
The new power unit is a transistorized inverter, operating from a 36-volt storage battery system. It provides 1 kva of standard 115-volt, 60-cycle current. The Onan inverter power unit consists of a transistor inverter, load transfer relay, a 36-volt, accurately controlled battery charger, meters, terminals, etc., mounted in a steel cabinet. *D. W. Onan & Sons, Inc., Dept. RA, Minneapolis 14, Minn.*



Hydraulic Digger

A new high-torque, three-speed hydraulic digger has auger torque up to 8,400 ft-lb. This series 5400 earth borer has low speed with high torque, a higher speed with lower torque, and a spin speed. When set for low speed and high torque, the digger burrows through hard, rocky terrain and handles augers up to 30 in. in diameter. When set for the lower torque and higher speed, it accomplishes normal digging and handles augers up to 16 in. in diameter. At spin speed, the digger throws mud and dirt off the blades.

Operation is simple, according to the manufacturer. To switch from high torque to low torque, the operator simply pushes a lever on the digger head. For spin-off, the operator pulls a cord that moves another lever on the head. After spin-off, the digger automatically returns to the previous speed. The digger is operated from controls on the back of the truck. Swivel mounted, it tilts and swings any way the operator desires. *J. H. Holan Corporation, Dept. RA, 4100 West 150th St., Cleveland 35, Ohio.*



Fault Locator

A new cable fault locator has been specifically designed to provide a simple, accurate means for locating cable faults including shorts, grounds, crosses, high resistance faults, open conductors, open pairs and split pairs. Two measurements can be obtained by means of a single dial. The instrument has a self-contained transistorized tone generator and a self-contained tuned amplifier-detector. *Whitney-Blake Company, Dept. RA, New Haven 14, Conn.*

Aerial Unit

An aerial unit designed specifically for railroad use features an hydraulic aerial beam installed on a vehicle equipped for on-the-rails or on-the-road operation. Railroads have found the Sky-Master ideal for use in the trimming and removal of trees and maintenance and repair of electrical communication and signal equipment. It enables a crew to reach work quickly, safely and easily, thus promoting the handling of minor painting and repair work before it becomes a major maintenance problem.

The Sky-Master consists of hydraulically actuated, independently operated steel beams installed on a rotating mast, with insulated operator enclosures attached to the outer beam. Power is derived from a hydraulic pump which is driven by a power take-off installed on the truck transmission.

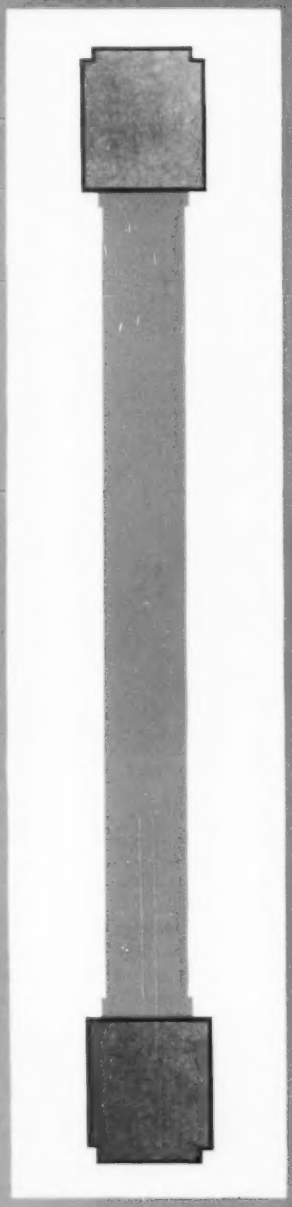
Sky-Master is available in one and two-man models, having ground-to-basket floor heights ranging from 37 ft to 43 ft. *McCabe-Powers Body Co., Dept. RA, 5900 North Broadway, St. Louis, Mo.*

Gaff Climbers

Two new replaceable gaff adjustable climbers feature the gaff held in position by a self-locking screw. Full impact when using the climber is absorbed by the gaff and leg iron. No load is transmitted to the screw. The climbers are adjustable from 14½ to 19 in., made in matched pairs right and left. Offset shank brings gaff in proper line with leg iron. *Mathias Klein & Sons, Dept. RA, 7200 McCormick Rd., Chicago 45.*

Load-saving **NEWS** from
Standard Car Truck Company:

the CUSHION COLUMN



Low Cost Built-in Protection Against Switching Impacts! Interconnects the Two Regular Draft Gears; Combines Their Action, Providing More Energy Absorption in All Buffing Shocks!

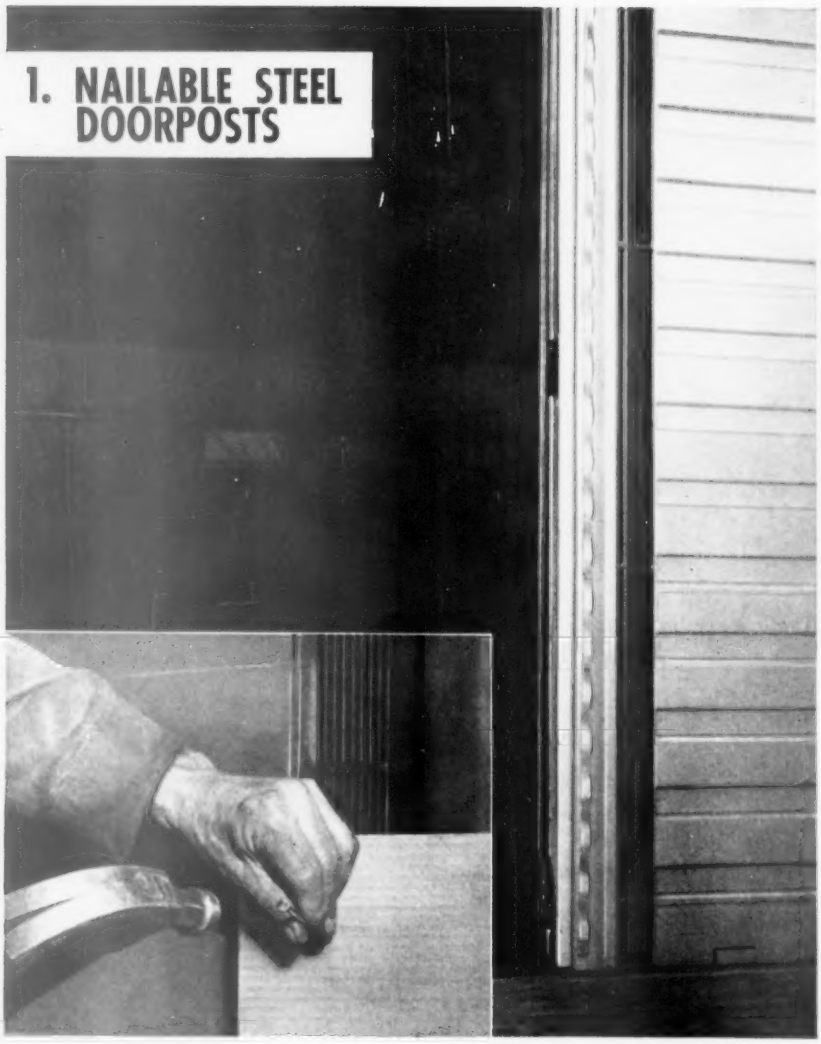
Good news for you, and for your shippers of hard-to-handle shipments!

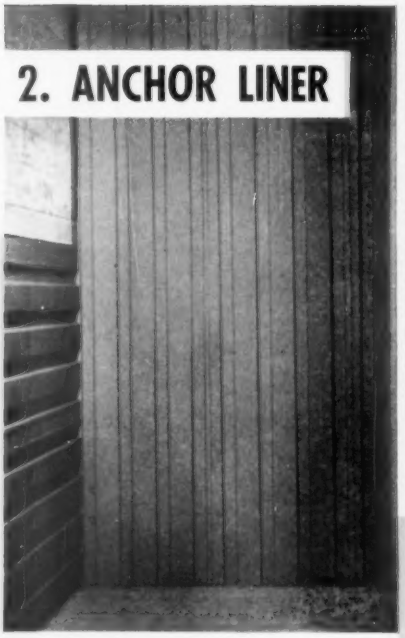
The CUSHION COLUMN is a simple, rugged steel tube installed within the center sill of the freight car underframe, between the draft gears. Made of high tensile steel, the CUSHION COLUMN utilizes the effectiveness of two standard draft gears acting together in series to the greatest possible advantage in switching and other impacts. The gears act independently, and normally, in draft.

Scientifically tested (test report available)...now in actual, everyday interchange service, the CUSHION COLUMN does these things: 1) Reduces impact forces throughout the car structure, 2) Increases energy absorption, 3) Reduces coupler force, *and*, 4) COSTS LESS THAN HALF of any other center sill cushioning improvement. STANDARD CAR TRUCK COMPANY, 332 S. Michigan Ave., Chicago 4, Illinois.

See the CUSHION COLUMN... Evaluate it for yourself... at the ALLIED SHOW TRACK EXHIBIT, CHICAGO... September 20th thru 23rd!

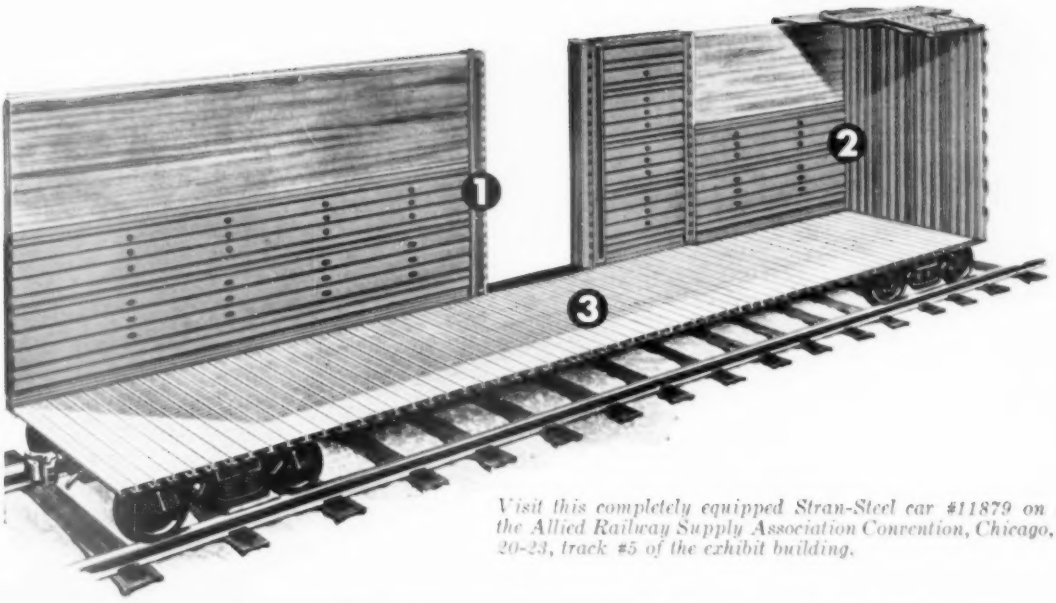
3 STRAN-STEEL RAILROAD PRODUCTS SAFEGUARD ALL VITAL AREAS, LENGTHEN BOXCAR LIFE





Stran-Steel Anchor Liner helps protect sidewalls and endwalls against the damage which commonly causes 70% of rip-tracking. Recessed strap anchors make bracing of lading quick, easy and safe.

◀**Nailable Steel Doorposts** with steel grooves take repeated nailing of grain doors without weakening or splintering (see inset photo), strengthen vulnerable doorways, protect against lading and lift truck damage, and stand up for years of Class A service. Nailable Steel Doorposts can be used with either sliding or plug doors.



Visit this completely equipped Stran-Steel car #11879 on display at the Allied Railway Supply Association Convention, Chicago, September 20-23, track #5 of the exhibit building.

Side heights are variable; endwalls full length. GLX-W high-strength steel reduces dead weight compared to ordinary carbon steel liners of equal strength.

Nailable Steel Flooring solves floor repair problems, adds structural strength to the underframe, and helps move more freight with fewer cars. N-S-F cars carry all types of lading—rough, sacked, finished or bulk and stay in revenue service longer. Unique nailing grooves insure secure blocking, floors remain damage-free.

Seventy leading railroads now have more than 72,000 N-S-F freight cars in service. If you would like detailed information and cost studies, contact your nearest Stran-Steel representative. Offices in Chicago, New York, Philadelphia, St. Louis, Cleveland, San Francisco, Minneapolis and Atlanta. In Canada, Stran-Steel railroad products are made and sold by International Equipment Co., Ltd., Montreal.

Dept. K-43

STRAN-STEEL CORPORATION

Detroit 29, Michigan • Division of

NATIONAL STEEL CORPORATION

Non-Spin Wheel Hand Brake ...Can't Be Ground Released!

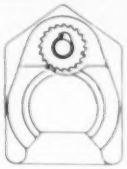
- **New baffle wall prevents ground releasing... also keeps out dirt and other foreign materials**

Next time you specify vertical hand brakes, select the one that's not only designed to prevent careless releasing, but the one that's easiest and most dependable to use... the Equipco Non-Spin Wheel Hand Brake. New baffle design requires brakeman to be on car where he can be in complete control and have full view of the operation. Also features pressed steel wheel with forged hub. One hand operation lets brakeman keep a firm grip on grab-iron... with no levers to confuse him or to require him to look *anywhere* but to his spotting duties.

Also available are Equipco Horizontal Drop-Shaft Hand Brakes and Equipco Lever-Type Hand Brakes.

New Baffle Design

Heavy line shows position of new baffle enclosing clutch from bottom. Prevents ground releasing and subsequent brake damage.



Simple, Safe Operation

To set turn wheel clockwise. Can't jam or dump-off. Holds loaded cars on inclines, no creep, no rolling.

For gradual release turn counter-clockwise as needed to control movement. Smooth, coined wheel can't snag, is easy to grip.

For full release give wheel a sharp counter-clockwise spin. Action is fast, trouble-free. No levers, explosives—nothing to touch but the wheel.

Come Visit Us!

See and operate the newest Equipco Hand Brakes at Allied Railway Supply Association Convention.

All Equipco Hand Brakes are A.A.R. Certified

Equipco

UNARCO

HAND BRAKE DIVISION

Union Asbestos & Rubber Co.

2954 W. Vermont St., Blue Island, Illinois

NEW EQUIPCO LOAD DIVIDER

for box cars, insulated box cars, refrigerator cars

Gives you 4-point locking... with a single operating bar!

- **Reduces loss and damage claims**
- **Cuts loading time . . . reduces dunnage**
- **Can be load-sealed for LCL shipment**
- **No loss of refrigeration efficiency**

Easy-to-use Equipco Load Dividers roll into place with minimum effort. Fit snugly against lading and are locked into position at 4 points—2 top and 2 bottom—with a *single operating bar*. Permit car to be segmented for profitable and safer transit of lading. Dividers are permanently secured—no loose parts. Thoroughly use-tested to meet both railroad and shipper's requirements.

Can be positioned to meet practically any lading needs.

No interference even when loading both ends of car at same time.

Any one or all dividers store out of way next to side or end walls.

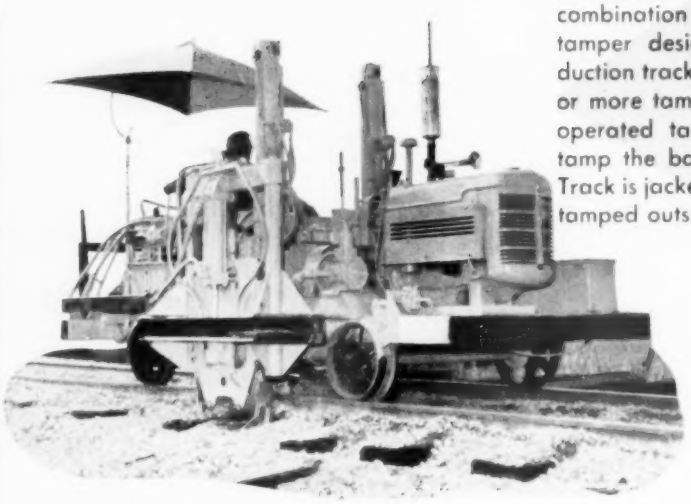
See and operate the new Load Divider at the Allied Railroad Supply Association Convention. Visit our exhibit at Track 5.

"Supplying Railroad Equipment Specialties for over 35 Years"

Equipco UNARCO

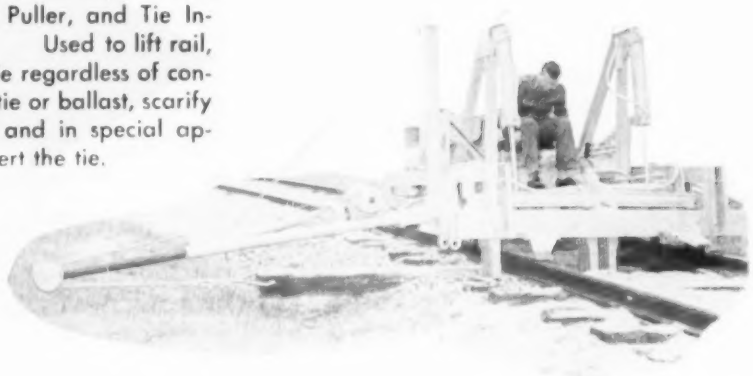
EQUIPMENT SPECIALTIES DIVISION
Union Asbestos & Rubber Co.
2904 W. Vermont St., Blue Island, Illinois

KERSHAW



KERSHAW SUPER-JACKALL — A combination hydraulic jack and tamper designed for high production track raises ahead of one or more tampers. Hydraulically-operated tamping feet actually tamp the ballast under the ties. Track is jacked inside rail and ties tamped outside of rail.

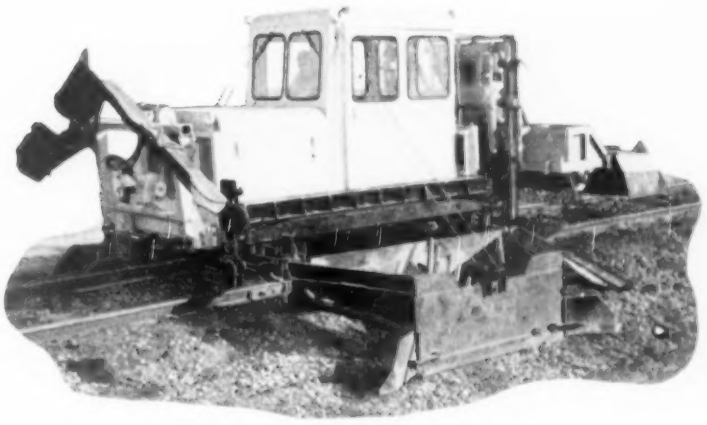
KERSHAW TIE REPLACER (Combination Rail Lifter, Tie Bed Cleaner, Tie Puller, and Tie Inserter) — Used to lift rail, remove old tie regardless of condition of the tie or ballast, scarify the tie bed, and in special applications insert the tie.



KERSHAW TIE BED CLEANER (With Tie Inserter Attachment) — Used to scarify tie beds after old ties have been removed. Special teeth enable the machine to scarify under the rail. After the tie bed is scarified, Tie Inserter Attachment then inserts new ties.

QUALITY MACHINES ANY

KERSHAW STANDARD BALLAST REGULATOR (Track Patrol) — Is used with out-of-face surfacing gangs, and as a track patrol to scarify, deweed, regulate and shape ballast. It also is used to regulate and distribute ballast after unloading in surfacing operations. With timbering gangs it is used to plow and spread the ballast from tie ends. The Kershaw Ballast Regulator is used to regulate and shape the ballast shoulder. Hand labor is not required in any of these operations.



KERSHAW HEAVY DUTY BALLAST REGULATOR (Shown With Broom Attachment On Rear) — Equipped with heavy duty truck axles with enclosed drive, longer wheel base, reinforced reversible wings equipped with heavy duty scarifying teeth, and many other heavy duty features. And also is used in all operations performed by the Standard Ballast Regulator, and all types of ballast maintenance work.

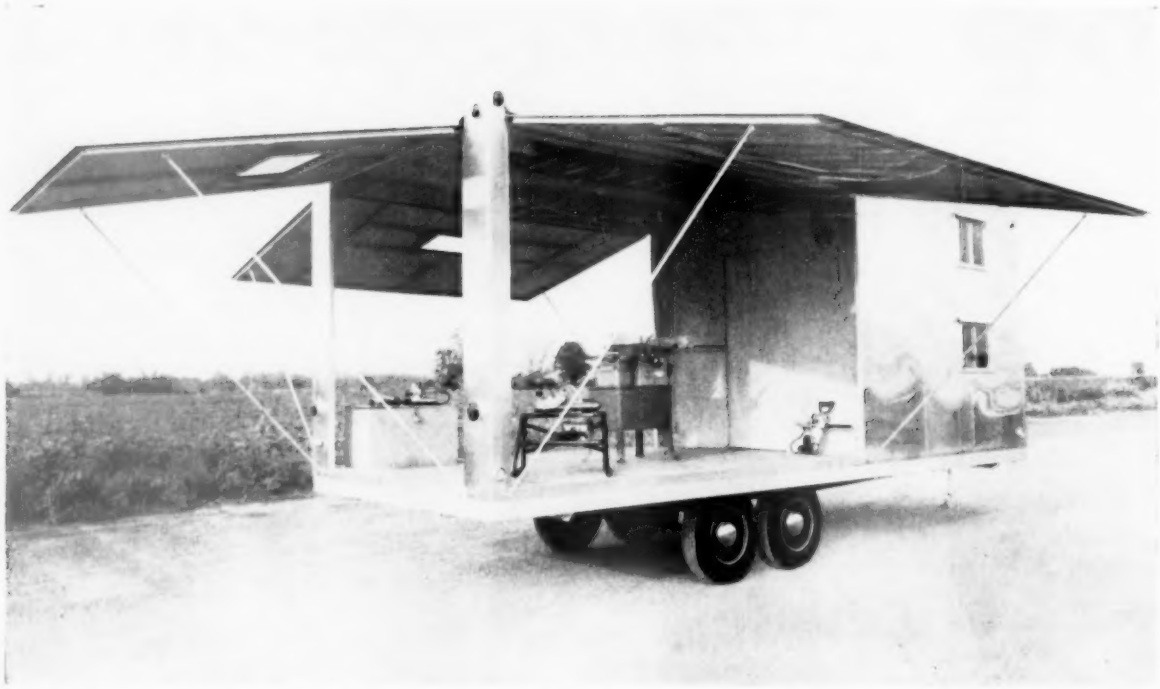
OTHER FAMOUS KERSHAW PRODUCTS

Kershaw Track Crane
Kershaw Ballast Cleaner
Kershaw Undercutter & Skeletonizer
Kershaw Crib-Adze
Kershaw Two-Ton Rail Derrick
Kershaw Two-Wheel Kribber
Kershaw 40" Kribber
Kershaw Foreman's Sight Car
Kershaw Utility Derrick
Kershaw Mocar Crane
Kershaw Track Broom
Kershaw Spot Tamper
Kershaw Rotary Snow Plow
Kershaw Road-Crossing Scarifier
Kershaw Universal Set-Off Assembly

See These And Other Kershaw Machines On Display At Booths 21-S through 28-S During The Roadmasters And Maintenance Of Way Exhibit At The Chicago Coliseum, September 14-17.

RAILROAD CAN AFFORD!

KERSHAW MANUFACTURING CO. INC
MONTGOMERY K ALABAMA



SHOP AREA in the trailer is 7 ft 6½ in. wide, 12 ft 8 in. long. Hinged side doors have all-aluminum welded frames with exterior aluminum sheets riveted to framing. Props for hinged sections are self storing.

B&B Men Live, Work in Trailer

EQUIPMENT in the shop includes a 24-ft aluminum extension ladder; a 6-ft aluminum step ladder (both stored overhead); a motor-operated combination 10-in. tilting arbor saw and 6-in. long bed jointer; a 3-in. combination edge and surface plane; an orbital hand sander; a power saw; and power hand-held drills in two sizes—all powered by an Onan generater. A tool chest for individually owned tools is provided.

Carpenters and helpers on the Central of Georgia now live right on the job. This is made possible by the recent introduction of a trailer that serves as a shop as well as a home. Thus, the trailer becomes the headquarters of the bridge and building crew, and it moves with the men wherever they go.

"This is the most advanced of all our trailers, and we expect great things from it," said W. E. Chapman, chief engineer maintenance of the Central, who conceived the idea for it.

The first trailer of the new type was placed in service several months ago. It is understood that two additional units of the same type have now been delivered. All three were built by the International Car Division of Morrison-International Corporation, Buffalo, N. Y. This company has added the trailer to its line of Campcars.

It is pointed out that four men can sleep comfortably in the trailer, two in double-deck bunks in the living quarters and two others, if necessary, on roll-a-way beds in the work area. This area has hinged walls that may be propped open to enlarge the working space and to provide shelter beyond the confines of the shop itself.

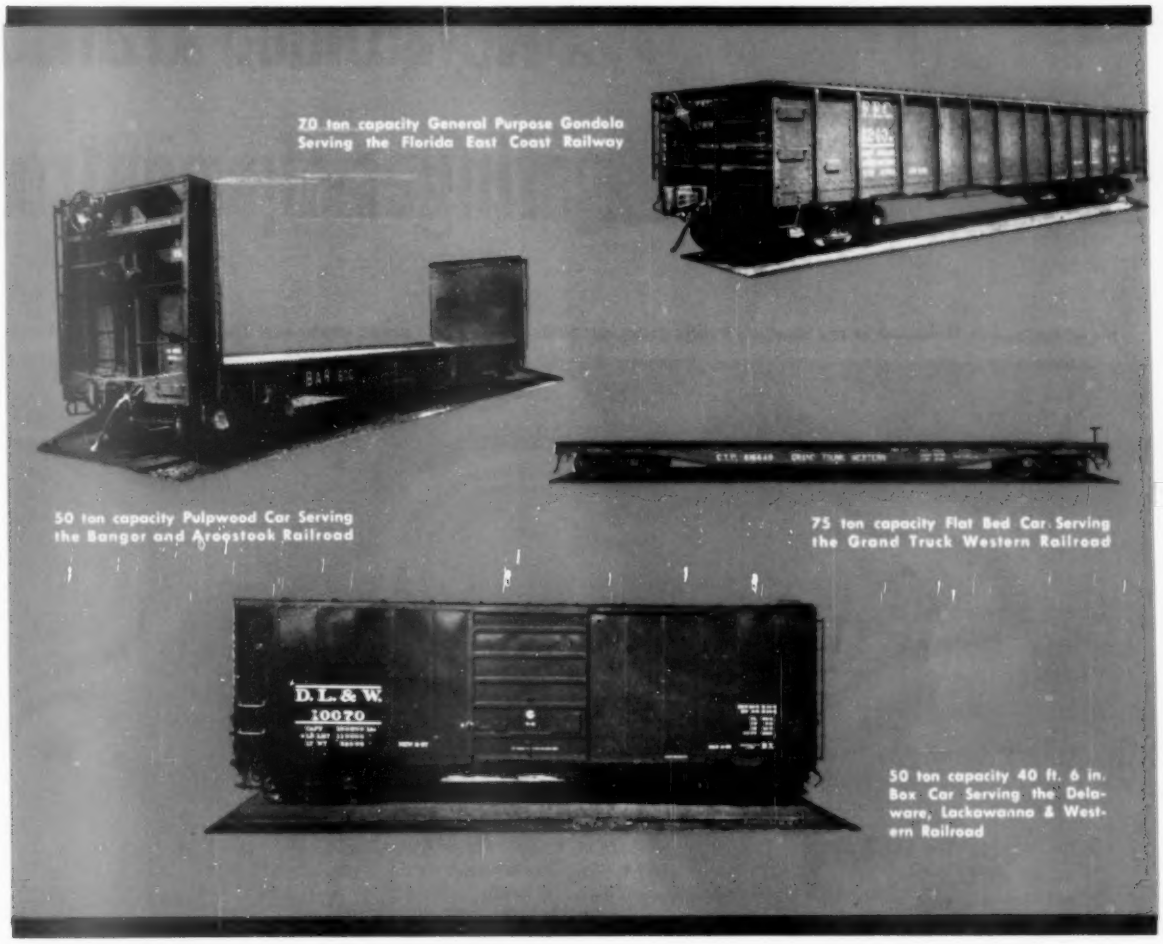
Mr. Chapman points out that the road's division carpenters and helpers are assigned to headquarters on these trailers, each of which is accompanied by a two-ton stake-body truck as a companion unit. At the end of each week, the trailers are left at the point of work and the men return to that point on the following Monday at work time. "The force may work at two or three or more locations in a day and be at their headquarters at all times during the week," he explains.

Mounted outside the trailer at the forward end are two 60-lb dual-regulated cylinders of propane gas that serves as fuel for the hot water heater, space heater and cook stove. The water system may be supplied from a city water connection or from a 110-gallon storage tank in the Campcar ceiling.

The trailer is mounted on four heavy-duty wheels with tandem axles and 7.00 by 15 eight-ply tires. Electric brakes are provided, complete with wiring and controls for the towing vehicles.

MAGOR CARS

FOR DEPENDABLE SERVICE



Standard, special or custom made – Magor makes a complete line of freight cars to the most rigid specifications.

The engineering know-how and manufacturing skills of 56 years experience stand behind the Magor promise of dependability!

The Magor Car Corporation welcomes the opportunity of submitting estimates, specifications and recommendations tailored to meet your requirements.
Write today!

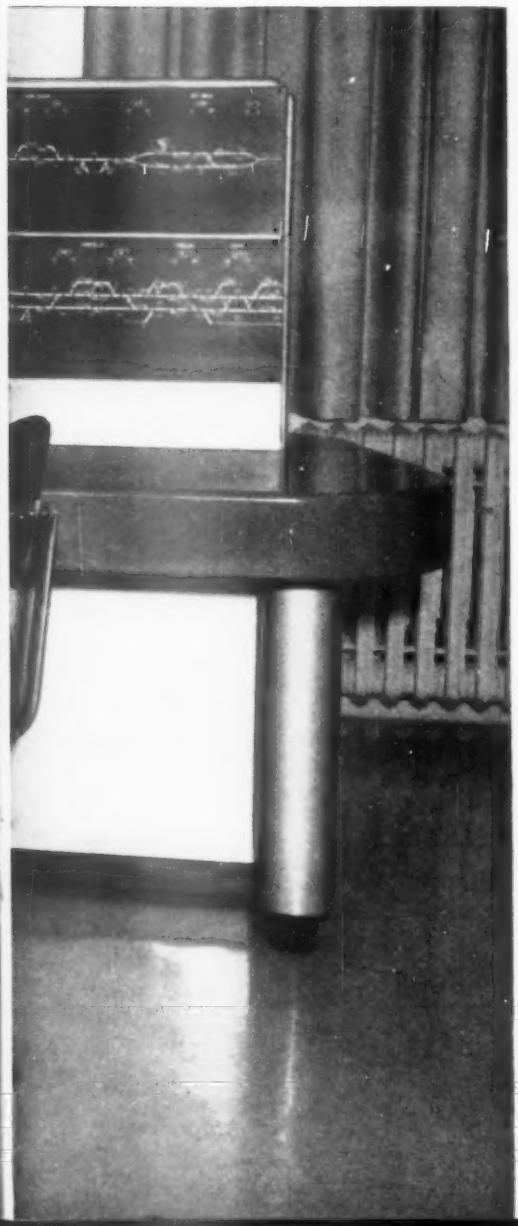
MAGOR
CAR CORPORATION

50 CHURCH STREET
NEW YORK, NEW YORK

New Union Traffic finger-tip control

Signal Engineer H. B. Garrett of the Southern Pacific Company at the controls of a model of the new Union Traffic Control Center.

Control Center gives Southern Pacific of 125 miles of single track



THE SOUTHERN PACIFIC COMPANY has long been a user of CTC. In 1929, this progressive railroad first installed CTC on the Stockton to Brighton, California, service. And the first installation of coded carrier control for CTC was made by it in 1942.

Southern Pacific has installed a new traffic control center in the Tucson dispatcher's office. Traffic flow along 125 miles of single track between Mescal, Arizona, and Lordsburg, New Mexico, is controlled by finger tip!

This control center furnished by Union Switch & Signal now makes another major contribution to better traffic-handling efficiency.

LESS THAN HALF THE SIZE of conventional panels, the new Union Traffic Control Center features a miniature track design and modular construction.

FINGER-TIP CONTROL is achieved by concentrating *all* controls in a small operating console in front of the dispatcher.

TERRITORY being controlled can be expanded easily at any time. And this new control center can be used with any existing control system.

Investigate CTC. Find out how CTC can cut your operating costs by 25% or more as it has for others. Learn how you can control the movement of trains more efficiently. Talk to any Union Switch & Signal Representative.

"Pioneers in Push-Button Science"

UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE, PENNSYLVANIA

NEW YORK • PITTSBURGH • CHICAGO • SAN FRANCISCO

People in the News

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—**Ralph C. Buckingham** appointed assistant secretary-treasurer.

BALTIMORE OHIO.—**Alva S. Baker,** manager merchandise traffic, Baltimore, Md., retired.

BURLINGTON.—**Octave M. Detoy,** general agent, San Francisco, retired Aug. 31.

CANADIAN NATIONAL.—**G. A. Howard,** superintendent of shop methods, Montreal, appointed regional co-ordinator of work study for the Western region, Winnipeg.

John T. Dixon has joined the CNR as co-ordinator of accounting development. Mr. Dixon was formerly assistant comptroller of Mannesmann Tube Co. Ltd.

E. P. Burns, superintendent, Stratford Ont., division, transferred to the Ottawa, Ont., division, succeeding **G. T. Dunn,** on leave of absence due to illness. **J. H. D. Robitaille,** assistant superintendent, Ottawa, Ont., transferred to Montreal, succeeding **W. L. Newell.** Mr. Newell replaces **E. W. B. Kavanagh** as assistant superintendent, Cornwall subdivision, Montreal. Mr. Kavanagh appointed assistant superintendent, Richmond, Que.

CANADIAN PACIFIC.—**W. Miller,** assistant to freight traffic manager, Montreal, appointed assistant to general traffic manager there. **K. D. Carmichael,** assistant general freight agent, Montreal, succeeds Mr. Miller.

CHESAPEAKE & OHIO.—**J. H. Suthann,** manager of piggyback services, Detroit, Mich., transferred to Cleveland, Ohio.

R. L. Milner, staff assistant to chief engineer, appointed transportation assistant, Huntington, W. Va., succeeding **R. Snell,** retired.

T. G. Spatig appointed assistant mechanical engineer, Richmond, Va. Abolished position of special engineer, formerly held by Mr. Spatig.

DENVER & RIO GRANDE WESTERN.—**C. E. Mills** appointed general agent, Fresno, Cal., to succeed **M. E. Pyeatt,** who retired Aug. 31. **R. L. Burnett** and **Jack McMillen** named general agents, Medford, Ore. and Santa Rosa, Cal., respectively.

ILLINOIS CENTRAL.—**James S. Frost,** general industrial agent, promoted to director of industrial development, Chicago.

NEW YORK CENTRAL.—**Paul J. Schweibinz,** freight sales manager, Cleveland, promoted to coal sales manager at that point, succeeding **Peter P. Belitz** retired. **John E. Norwood,** assistant freight sales manager, Detroit, succeeds Mr. Schweibinz as freight sales manager at Cleveland. **Harold T. Miller,** merchandise sales manager, Cleveland, promoted to the newly created position of administrative assistant to the assistant vice president freight sales and service, Cleveland. **William A. Frei,** freight salesman, named assistant freight sales manager, Cleveland, succeeding **Robert H. Timson,** transferred to Detroit.

ROCK ISLAND.—**Kenneth W. Barbian** named supervisor of insurance and fire prevention, Chicago, succeeding **Frank A. Plesser,** retired.

SOO LINE.—**Ernest A. Jensen,** formerly assistant general adjuster, Burlington, appointed assistant general claim attorney, Soo Line, Minneapolis.

SOUTHERN PACIFIC.—**Frank T. Kearns,** assistant to manager of industrial development, San Francisco, appointed industrial agent, Los Angeles, to replace **G. W. R. McClelland,** promoted to assistant general industrial agent. Mr. Kearns' successor is **V. Murray Richardson,** district freight and passenger agent, Sacramento, Cal., who in turn is replaced by **George W. Morgan,** transferred from Eugene, Ore. **William L. Peebles,** general agent, Spokane, Wash., named to succeed Mr. Morgan, and in turn is succeeded by **C. G. Alton,** general agent, Seattle.

Howard J. Willard appointed construction division engineer, San Francisco.

VIRGINIAN.—**Berkeley Mills,** assistant general manager, appointed acting general manager, Norfolk, Va.

OBITUARY

Earle B. Perry, 70, who retired four years ago as assistant vice president of personnel for the **New Haven,** died Sept. 8 after a long illness.

A. Ivan Tummon, 50, executive secretary, **National Railroad Adjustment Board,** died Sept. 4 in his home at Chicago.

Supply Trade

Loran C. Morris has been appointed railroad marketing manager for **Sperry Products, Inc.,** Danbury, Conn.

Southern Electric, Inc., Hammond, Ind., has acquired all of the stock of the **Rolin Corp.,** Chicago, a journal lubricator manufacturer, and will operate the Rolin business as a wholly-owned subsidiary. **Robert L. Moxley,** president of Southern Electric, also will be president of Rolin. **Robert V. Connors** has been named vice president in charge of sales and operations.

Bill Davey has joined **Western Railway Equipment Co.** and **Railway Devices Co.** as assistant to general manager at St. Louis. He was formerly associated with **Greenville Steel Car Co.**

Hans Schwarz has been appointed manager of general engineering and development in the research and development department of **ALCO Products, Inc.,** Schenectady, N. Y. Mr. Schwarz was formerly a senior project engineer for ALCO at Schenectady.

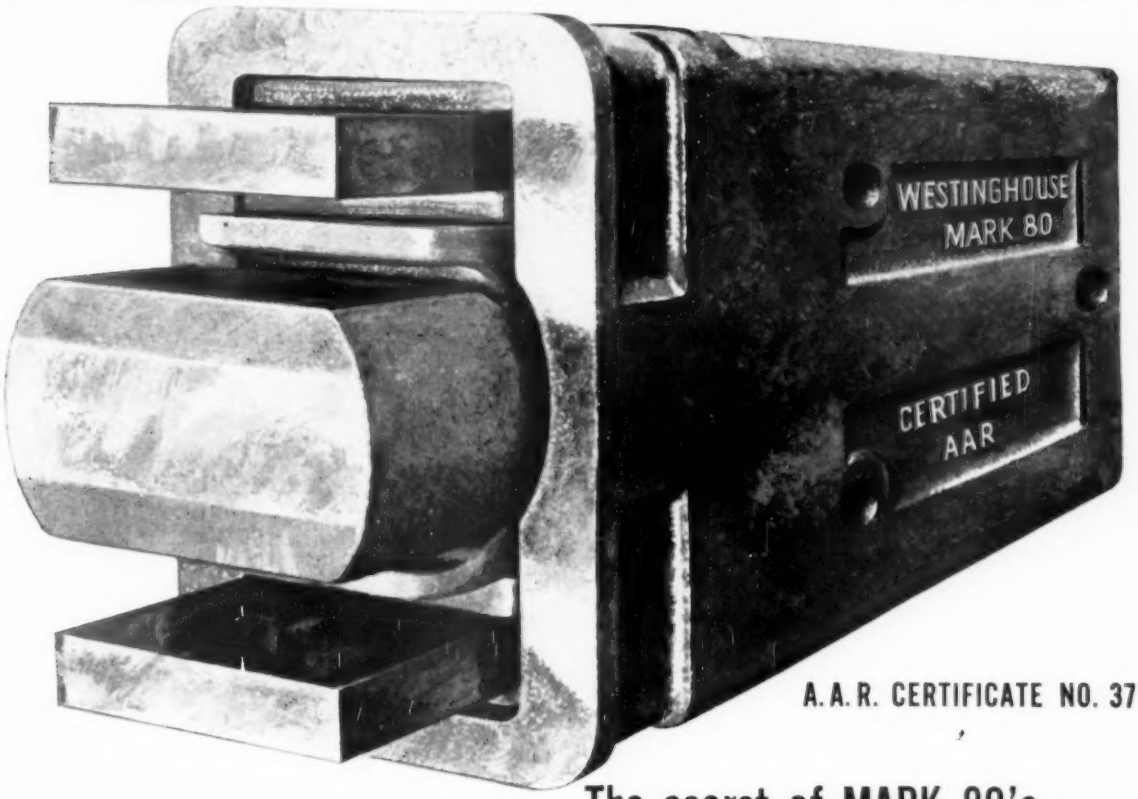
Edward E. Combs, chief engineer, has been appointed vice president—engineering, **Lynch Carrier Telephone Systems, Inc.,** San Francisco.

John O. Cushing, field engineer, Cincinnati district, **SKF Industries, Inc.,** has been appointed district manager, Atlanta, Ga., and will direct the sales and engineering services in that district.

McDougall-Butler Co., Buffalo, N. Y., paint manufacturers, announce the availability of their folder "National Safety Color Code." This folder covers the national color identification system for safety promotion and more efficient industrial production through equipment identification.

R. A. Petersen has been named vice president and general manager of the **Rent A Car Division of the Hertz Corp.,** Chicago. Mr. Petersen was formerly assistant general manager of that division.

LET ME CUT YOUR DAMAGE CLAIMS!



A.A.R. CERTIFICATE NO. 37

WESTINGHOUSE

MARK 80

FRICTION DRAFT GEAR
FOR **36-INCH** POCKETS

The secret of MARK 80's success: 77,320 foot pounds of capacity with only 447,000 pounds of sill pressure

Fundamentally, the control of damage claim costs begins at the point of *impact*...right behind the coupler.

The tremendous shock-softening capacity of a Mark 80 *Friction* Draft Gear...in one relatively small package, with less than 500,000 pounds of sill pressure...has never been approached.

Install Mark 80's and watch your damage claims and car repair costs go down!

CARDWELL WESTINGHOUSE COMPANY

332 S. Michigan Ave., Chicago 4, Ill.

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session is expected to get increased pressure for extension of the Interstate Commerce Act's reparations provisions to truckers and forwarders. On this score, the shippers took a set-back this year when the U. S. Supreme Court ruled that motor carriers are now immune to reparations claims (RA, May 25, p. 10). This decision ended the practice of getting reparations awards in courts on the basis of ICC findings that assailed truck rates of the past were unreasonable. Whether the railroad industry will support this shipper proposal or seek to have reparations provisions eliminated entirely from the Interstate Commerce Act has not been decided.

As to the pending per diem bills, one of them could pass if the railroads don't get together on this controversial matter. The bills, which the ICC supports, and the National Industrial Traffic League opposes, would authorize the Commission to put incentive and penalty factors into car-rental rates, thus using them to promote increased car ownership and more efficient utilization. An "incentive bill" has already reached the Senate calendar with a favorable report from that body's Interstate Commerce Committee. It would give the Commission a choice of bases for fixing per diem rates—car-ownership costs or value in use.

While working for their positive program, the railroads will also be working in 1960 to prevent enactment of legislation they consider adverse to the industry—especially the pending "make-work" measures sponsored by the Railway Labor Executives Association. Most threatening of these is the so-called track inspection bill which would give the ICC power to prescribe rules for the operation of track motor cars.

This may be hard to beat. It has the support of the ICC, and next year is an election year when Congress will be disposed to "do something" for railroad labor. Similar circumstances prevailed in 1958 when the railroads failed to prevent passage of the brake-inspection act which gives the Commission authority to prescribe rules for the inspection, testing and maintenance of train brakes.

The next session will bring forth renewal of the drive to amend the 1958 Transportation Act's service-abandonment provisions. The proposed amendments, which would make it more difficult for railroads to eliminate unprofitable trains, are sponsored principally by senators and representatives from states with commuter-service problems and supported by railroad labor organizations.

Congress is not expected to do more in this situation than the ICC has recommended, i.e., require the railroads to give 40-days' notice of proposed service changes, increase to seven months the period for which the Commission can suspend such notices, and put the burden of proof in these train-off cases on the railroads.

Present provisions require only 30-days' notice and put a four-month limit on the period for which a notice can be suspended. The burden-of-proof phase doesn't seem to have bothered the Commission, but it has nevertheless advised Congress that all doubt about the matter should be removed.

In addition to inquiries on ownership of one form of transportation by another and user charges, the S.Res.29 studies will investigate various other matters left untouched by the Transportation Act of 1958. These include the need for transport regulation under present conditions, federal policy on mergers of transport companies, the kind and amount of railroad passenger service needed to serve the public interest and the national defense, and problems arising from ICC actions granting relief from the long-and-short-haul clause.

The resolution also has an omnibus clause authorizing the committee to add inquiries into any matter "of federal regulation (and exemption therefrom) and federal promotional policies in regard to various forms of transportation."

The studies are just now getting under way, so they are expected to continue during Congress' 1960 session. They are being conducted by a newly recruited staff headed by Major General John P. Doyle, retired, who was formerly director of transportation for the Air Force. The AAR, of course, will make sure that General Doyle and his staff have the railroad industry's point of view on all matters covered.

Dividends Declared

BANGOR & AROOSTOOK.—reduced, 20¢, payable Sept. 30 to holders of record Sept. 14.

ELMIRA & WILLIAMSPORT.—$1.16½, semiannual, payable Oct. 5 to holders of record Sept. 21.

KALAMAZOO, ALLEGAN & GRAND RAPIDS.—$2.90, semiannual, payable Oct. 1 to holders of record Sept. 15.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—50¢, semiannual, payable Sept. 28 to holders of record Sept. 14.

MISSOURI PACIFIC.—Class A, 60¢, quarterly, payable Oct. 1 to holders of record Sept. 21.

PITTSBURGH, YOUNGSTOWN & ASHTABULA.—7% preferred, $1.75, quarterly, paid Sept. 1, to holders of record Aug. 20.

PROVIDENCE & WORCESTER.—$2.50, quarterly, payable Oct. 1 to holders of record Sept. 14.

READING COMPANY.—4% 1st preferred, 50¢, quarterly, paid Sept. 10 to holders of record Aug. 20.

SEABOARD AIR LINE.—50¢, quarterly, payable Sept. 25 to holders of record Sept. 11.

SOUTHERN.—70¢, quarterly, payable Sept. 15 to holders of record Aug. 14. Mobile & Ohio stock trust, $2, semiannual, payable Oct. 1 to holders of record Sept. 15.

SOUTHERN PACIFIC.—stockholders will vote at a meeting to be held on Oct. 15 on a proposal to split the shares on a 3 for-1 basis.

UNION PACIFIC.—common, 30¢, quarterly; 4% preferred, 20¢, semiannual, both payable Oct. 1 to holders of record Sept. 8.

3-way proven protection

FOR JOURNAL BOXES *with*

JBS

ACME LUBRICATORS

(AAR Conditionally Approved)

JBS Acme Journal Lubricators* alone have the exclusive batted 100% wool quilted core which retains four times its own weight in oil reserve. Heavy chenille loop surfaces of 30% wool and 70% cotton assure constant resiliency and an ample supply of filtered oil at all times even at a temperature of 45° below zero. The rectangular shape of JBS Acme Lubricators is particularly designed to insure snug fit and prevent displacement in the journal box. They require no modification of the standard journal box, and assure better performance with less servicing.

**Patent pending*

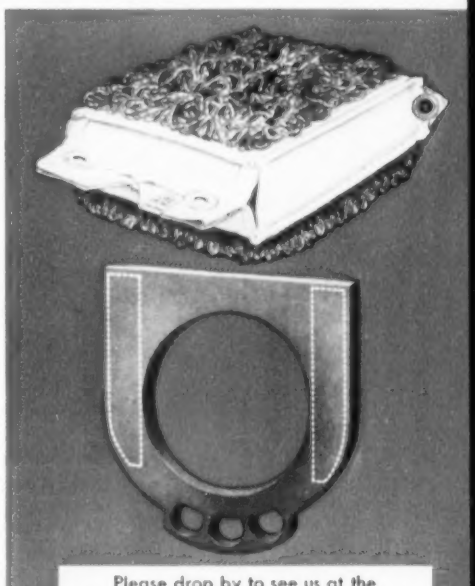
AXLE-STOP DUST GUARDS

The installation of Axle-Stop Dust Guards as a combination dust guard and axle stop limits the free motion of the journal, wedge and brass upon impact and brake application. Instead of the brass and wedge taking the shock of impact, two steel inserts positioned in the Axle-Stop Dust Guard absorb the shock, prevent the cocking of the brass and definitely lessen the possibilities of a hot box. Bearing distortion is eliminated, permitting it to assume its full crown and attain a life which has never before been possible.

RECLAMATION SERVICE

Journal Box Servicing Corporation is a veteran of more than 30 years' experience in reclaiming car oils and waste. Today, its 17 plants, strategically located in 14 states, are performing the same highly efficient and economical function for lubricator pads, restoring them to their original usefulness at a small fraction of their original cost.

WRITE TODAY for descriptive folders.



Please drop by to see us at the Allied Convention in Booths 124-125-126

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Railroading After Hours with Jim Lyne

100% INDIVIDUALIST—Some little time ago I mentioned here a work of fiction called "Atlas Shrugged," by an author named Ayn Rand—in which the hero was a railroad operating vice president, and (if you can imagine it) a woman.

A peculiar book—not written to tell a story, as much as to promote the author's philosophy of 100% individualism and anti-socialism. The book has been widely read and its doctrine seems to be gaining organized adherents. I saw one of these TV interviews with the author the other night.

Since Miss Rand opposes socialism in any form, the inquirer asked her what she would do about highways and the post office. Her answer was that she'd have highways and postal service, but she'd have them privately owned and operated.

I think the gal is right about this. Where I part company with her is in her grudge against religion, which is almost as strong as her quarrel with bureaucracy.

KEY-POUNDER'S HANDWRITING—W. E. Baer of La Cygne, Kans., an old-time telegrapher, recalls the days when members of that craft took pride in excelling with their penmanship.

"Beauty floated all about the relay offices," he reports. "Train dispatchers took special pride in their train sheets and order-books. The patterns in front of them fired the enthusiasm of the youngsters, who soon eased the tension of that cramped schoolkid hand and joined the competitive ranks. Thus, telegraphers gained a reputation as good penmen."

THEY'RE ALL DIVERSIFYING—Some railroads are keenly interested in acquiring the right to engage freely in other forms of transportation. They will find supporting evidence of parallel behavior by other industries, in the September issue of "The Freeman" magazine. The article is entitled "Undue Concentration in Business," and reports how oil companies are now making rubber, while a submarine company is now in the rocket business.

Market fences are falling apart, says the article, while "alert managements are trying by product diversification to make themselves independent of particular markets."

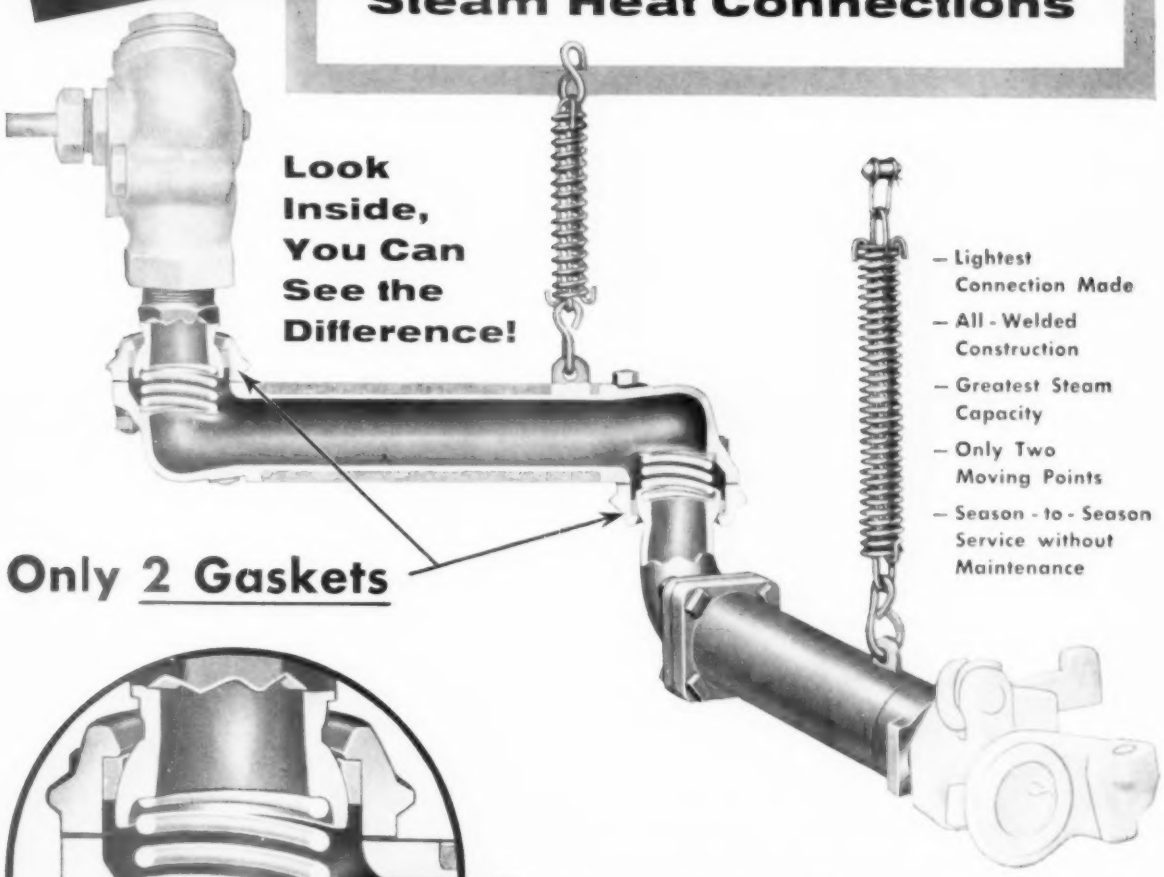
It has always been somewhat of a mystery to me why railroads did not show more interest in getting the "commerce clause" repealed. If a railroad could own a manufacturing business which did private trucking on the side, the railroads would know a lot more about their fastest growing competitor than they know now.

1ST CHOICE!

PRODUCTS BACKED BY EXPERIENCE

BARCO

Steam Heat Connections



Look Inside, You Can See the Difference!

- Lightest Connection Made
- All-Welded Construction
- Greatest Steam Capacity
- Only Two Moving Points
- Season-to-Season Service without Maintenance

Only 2 Gaskets

- Exclusive flexible ball joint design. Moves in any direction.
- The spherical ball seats against a single ring type gasket. Pressure sealing, self-lapping—for long, leakproof service.
- Gaskets are molded by Barco using a specially developed composition.
- Balls are hardened alloy steel, chrome plated, and resistant to wear.

BARCO IS THE CHOICE! There is good reason for this preference. On roads that have made careful comparative studies, Barco Connections have demonstrated their ability to cut costs—THE GASKETS LAST. Users get season-to-season service without maintenance. Barco Connections have 50% fewer wearing parts. Internal design is clean and streamlined for maximum steam flow with minimum pressure drop. Simple all-steel, welded construction means simple maintenance, fewer parts to stock, easy installation. *We will be glad to give you complete information.* BARCO MANUFACTURING CO., 501K Hough St., Barrington, Illinois. In Canada: The Holden Co., Ltd., Montreal.

Visit Barco's Exhibit, Booth 144-145, Allied Railway Supply Show, Sept. 20-23

BARCO—SERVING THE NATION'S RAILROADS SINCE 1908

These five pennies, during a 12-year period, more than covered all parts replacement costs on an average

NATIONAL

Ever since the introduction of the first C-1 truck over 12 years ago the basic design has remained unchanged. Today's National C-1 Trucks are still the original design—*a design that was right to start with.*

Here's proof of the correctness of that design.

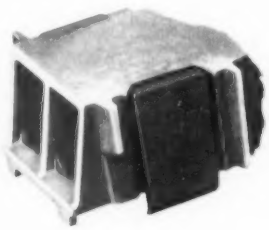
In spite of the fact that many of these trucks have covered hundreds of thousands of miles, our service parts sales records show an average replacement rate of an extremely low .00129% for wedges, wedge springs and wear plates.

This represents an average replacement cost of only $.0985 per carset—*less than 5 cents per National C-1 Truck in service!*

A-395A

wedges
.00131% replacement

wedge springs
.0019% replacement



wear plates
.00064% replacement

See the National C-1 Truck with over 370,000 miles "reefer" service in 8 years.
On display at the ARSA Show Hotel Sherman, Chicago, September 20-23.

C-1 TRUCK

because it was properly designed at the start

NATIONAL MALLEABLE and STEEL **CASTINGS COMPANY**

Established 1868

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Cleveland 6, Ohio

International Division Headquarters
Cleveland 6, Ohio

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HOW NEW YORK CENTRAL SYSTEM IS MASTERING THE HOT BOX PROBLEM THROUGH ADVANCED SCIENTIFIC SYSTEMS

NEW YORK CENTRAL's modernization program, involving scientific advances such as radioisotopes (for inspection) and electronic computer systems, also includes patented and operations-proved SERVOSAFE® Hot Box Detectives.* -■- Rounding off such large-scale improvements as expanded Centralized Traffic Control and improved repair techniques, NEW YORK CENTRAL has aimed at the heart of one of the principal causes of freight car delay and damage—the hot box. -■- The CENTRAL is able automatically to spot an overheated journal box out of harmless hundreds without unnecessary delays or risks . . . thanks to SERVOSAFE Hot Box Detectives installed at 32 strategic points on the main line. -■- Utilizing modern science in this way—using the advanced knowledge and skills of firms specializing in the functional applications of recently-developed scientific concepts—is basic to the CENTRAL's modernization program. -■- The SERVOSAFE system was developed and introduced by SERVO CORPORATION OF AMERICA, leaders in Systems and Functional Engineering. SERVOSAFE is patented* and time-tested, and is the *only* system which can use infrared technology for hot box detection efficiently, dependably . . . safely. -■- The NEW YORK CENTRAL is only one of 21 railroads to date which have purchased SERVOSAFE. This system insures protection of bridges and structures, safeguards rights-of-way, saves maintenance dollars. Our engineers will be glad to present facts and figures about the Detective System and the more recently perfected Carrier System and Automatic Alarm System . . . modular adjuncts to SERVOSAFE. Please write or phone:

*Protected by U.S. Patent No. 2,880,309.
Other U.S. & Foreign Patents Applied For.

Alfred E. Perlman (left), President, and John F. Nash, Vice President—Operation, New York Central System.

Railroad Product Sales

SERVO CORPORATION OF AMERICA

Serving Safety Through Science

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REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1959

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total inc. misc. 1959	1958	Operating Expenses: Maint. Way and Structures: Deprec. and Retirements		Maint. Equipment: Deprec. and Retirements		Traffic	Transportation	Total 1959	Total 1958	Operating ratio 1959	1958	Net from railway operation	Railway tax accruals	Net Railway operating income 1959	1958
Akron Canton & Youngstown	July	171	539		554	428	63	50	6	79	67	15	51	172	415	353	74.9	82.6	139	75	36	13
	7 mos.	171	3,549		3,644	2,820	424	357	39	524	444	104	307	1,096	2,669	2,408	73.3	85.4	974	536	297	42
Alabama, Tenn. & Northern	July	214	271		289	243	50	50	6	15	10	6	4	98	163	152	56.4	62.3	126	85	18	37
	7 mos.	214	1,989		2,059	1,726	349	347	45	82	178	39	31	581	1,067	1,198	51.8	69.4	992	268	153	63
Atchison, Topeka & Santa Fe	July	12,996	51,508	4,805	61,489	58,879	7,379	6,420	735	11,762	9,571	2,389	1,476	19,878	43,126	37,393	70.1	63.5	18,363	10,341	6,862	9,441
	7 mos.	13,067	328,272	22,858	381,108	331,787	47,203	40,976	6,244	74,144	66,102	15,934	9,764	130,442	278,115	250,109	73.0	75.4	102,993	58,508	38,496	32,359
Atlanta & St. Andrews Bay	July	81	358		364	306	34	28	3	32	28	8	8	79	175	153	48.1	50.0	189	85	89	49
	7 mos.	81	2,290		2,324	2,408	286	235	24	218	206	55	51	528	1,237	1,126	53.2	46.8	1,087	498	350	439
Atlanta & West Point	July	93	237	25	313	295	40	42	10	55	52	14	18	138	270	291	86.3	98.8	43	19	4	37
	7 mos.	93	1,687	158	2,211	2,097	291	259	86	362	368	100	126	932	1,862	1,904	84.2	90.8	349	124	62	96
Western of Alabama	July	133	298	23	358	308	49	42	10	60	59	19	20	139	288	272	79.7	88.2	73	52	25	14
	7 mos.	133	2,053	146	2,471	2,280	359	317	68	415	401	132	141	968	2,042	1,963	82.2	86.1	439	297	136	112
Atlantic Coast Line	July	5,300	9,856	1,238	11,927	11,149	2,025	1,881	368	2,351	2,389	641	478	5,097	10,585	10,441	88.8	93.7	1,341	325	535	413
	7 mos.	5,303	76,521	9,390	93,007	87,632	13,246	12,711	1,516	16,674	16,419	4,320	3,554	36,696	74,943	73,021	80.6	83.3	18,965	7,825	6,234	6,075
Charleston & West. Carolina	July	343	462		473	521	106	139	4	94	96	28	21	181	418	445	88.4	85.4	55	35	29	32
	7 mos.	343	3,876		3,958	4,093	877	801	54	658	592	201	147	1,266	3,065	2,862	77.4	69.9	893	540	419	435
Baltimore & Ohio	July	5,917	27,102	1,476	30,833	29,006	2,135	2,897	522	5,784	5,146	1,946	1,023	13,518	25,459	24,822	82.6	85.6	5,374	1,730	1,946	518
	7 mos.	5,917	211,380	8,704	236,786	217,385	25,979	21,867	3,517	42,780	37,039	7,892	6,886	99,582	189,471	175,207	80.0	80.6	47,315	15,917	19,388	15,446
Staten Island Rap. Tran	July	29	153	83	241	275	48	55	12	37	35	2	2	161	285	290	118.7	105.7	45	51	116	80
	7 mos.	29	1,287	589	1,923	1,987	380	376	84	273	259	12	15	1,099	2,005	1,965	104.3	98.9	82	339	576	461
Bangor & Aroostook	July	602	629	24	696	740	152	113	22	270	295	110	38	284	836	919	120.1	110.7	140	49	88	147
	7 mos.	602	8,299	162	8,767	9,814	2,125	2,368	137	2,931	2,029	795	229	2,599	7,596	7,911	86.6	80.6	1,171	650	1,174	1,679
Bessemer & Lake Erie	July	203	1,337		1,385	1,847	310	250	19	698	142	57	45	453	1,653	1,365	119.4	73.9	268	149	1	772
	7 mos.	203	14,051		14,491	8,175	1,712	1,727	157	4,598	3,592	974	273	3,402	11,042	9,519	76.2	116.4	3,449	3,818	2,554	253
Boston & Maine	July	1,570	4,453	642	5,576	6,026	740	816	160	854	759	286	147	2,592	4,704	4,912	84.4	81.5	873	573	200	136
	7 mos.	1,570	35,197	4,395	43,938	44,530	5,581	6,704	1,098	6,185	6,156	1,927	1,050	19,633	35,203	35,145	80.1	85.6	8,735	3,444	1,563	776
C. P. R. in Maine	July	234	464	50	557	457	145	137	20	90	55	17	9	153	417	381	74.7	83.3	141	38	27	4
	7 mos.	234	5,270	295	5,765	5,002	935	886	142	813	750	122	61	1,378	3,344	3,238	58.0	64.7	2,421	243	1,587	994
Carolina & Northwestern	July	285	226		232	227	42	52	7	30	31	21	6	77	174	182	75.0	70.9	58	12	7	8
	7 mos.	285	1,890		1,932	1,789	324	347	48	218	209	147	57	527	1,246	1,238	64.5	69.2	686	144	196	211
Central of Georgia	July	1,745	3,316	145	3,629	3,232	581	528	41	717	620	189	178	1,480	3,155	2,933	86.9	90.7	474	284	207	135
	7 mos.	1,753	23,609	863	25,845	24,434	4,039	4,057	304	4,854	4,542	1,326	1,233	10,244	21,726	21,299	84.1	87.2	4,119	1,836	2,295	1,763
Central of New Jersey	July	597	3,289	493	4,162	4,373	517	530	96	758	810	136	75	2,191	3,774	3,801	90.7	86.9	388	339	228	117
	7 mos.	597	25,145	3,385	30,856	30,503	3,567	3,702	668	5,684	5,377	1,139	526	15,127	26,534	26,174	86.0	85.8	4,323	3,122	328	305
Central Vermont	July	375	751	69	890	835	230	242	18	107	105	9	19	340	737	854	82.8	102.2	153	61	26	203
	7 mos.	375	5,335	344	6,216	6,104	1,318	1,813	129	788	761	66	138	2,480	5,001	5,547	80.5	90.9	1,215	367	13	837
Chesapeake & Ohio	July	5,122	23,122	547	25,487	26,001	3,140	2,800	471	5,224	4,586	1,871	627	10,358	21,089	19,968	82.7	76.8	4,398	1,913	2,852	3,925
	7 mos.	5,122	192,525	3,528	206,553	193,120	22,630	21,140	3,434	36,064	34,083	13,088	8,838	75,233	151,519	145,486	73.4	75.3	55,034	25,154	33,075	28,959
Chicago & Eastern Illinois	July	862	2,486	227	2,955	2,972	364	413	40	454	504	168	141	1,229	2,371	2,439	80.2	81.8	584	246	75	67
	7 mos.	862	18,610	1,176	21,678	20,173	2,530	2,597	209	3,482	3,437	1,124	1,012	8,460	16,680	16,550	76.9	82.0	4,998	1,515	1,876	742
Chicago & Illinois Midland	July	121	476		494	298	47	57	7	108	98	23	26	170	400	361	80.9	121.1	95	65	31	46
	7 mos.	121	4,089		3,113	3,466	299	273	53	708	728	162	212	1,932	2,554	2,504	62.1	72.2	1,560	878	621	340
Chicago & North Western	July	9,286	15,949	1,611	19,177	18,271	3,460	2,851	351	2,975	2,566	989	583	7,887	16,009	14,548	83.5	79.6	3,168	1,489	792	1,275
	7 mos.	9,287	107,431	10,692	128,709	119,258	21,039	17,974	2,268	21,550	19,636	6,953	3,851	55,160	109,470	101,986	85.1	85.5	19,238	9,267	3,832	2,141
Chicago, Burl. & Quincy	July	8,687	18,739	2,324	23,113	21,273	3,738	3,257	375	4,208	3,551	1,064	644	9,092	18,788	17,207	81.3	80.9	4,324	2,095	1,864	1,756
	7 mos.	8,687	126,704	11,594	152,860	139,907	21,786	18,617	2,871	30,641	25,979	7,288	4,569	60,860	125,033	113,298	81.8	81.0	27,828	14,023	10,432	10,967
Chicago Great Western	July	1,469	2,740	12	2,948	2,901	460	475	42	443	433	128	133	1,000	2,120	2,070	72.1	71.3	520	285	330	351
	7 mos.	1,469	18,576	58	19,988	20,088	2,899	3,174	312	3,003	2,978	918	890	6,658	14,026	14,062	70.2	70.0	5,962	2,097	2,274	2,472
Chic., Milw., St. P. & Pac	July	10,591	17,249	1,759	21,196	20,684	3,858	3,428	419	3,541	3,511	867	615	8,538	17,897	17,119	84.4	82.8	3,299	1,821	694	1,137
	7 mos.	10,591	118,481	8,545	141,354	133,591	22,639	20,882	2,879	24,825	24,701	5,187	3,895	57,289	117,370	113,723	83.0	85.1	23,984	11,473	6,890	3,645
Chicago, R. Is. & Pac	July	7,524	16,808	1,665	20,168	19,994	2,836	2,710	272	3,525	2,991	633	673	7,659	15,480	14,216	76.4	71.1	4,768	1,940	1,091	1,849
	7 mos.	7,544	113,505	9,677	134,947	119,706	17,229	14,404	1,846	22,904	20,419	4,390	3,969	52,461	103,601	92,748	76.8	77.5	31,348	15,296	7,668	7,427
Clinchfield	July	293	1,472	1	1,488	1,502	161	171	24	264	273	107	54	422	957	1,056	64.7	64.4	523	212	443	508
	7 mos.	293	12,351	5	12,423	11,964	1,529	1,578	155	2,203	2,300	746	450	3,110	7,760	7,686	62.5	64.2	4,663	1,443	4,239	3,963
Colorado & Southern	July	712	1,013	103	1,272	1,352	269	187	30	227	213	80	36	593	1,200	1,085	94.4	80.2	72	43	3	88
	7 mos.	715	8,212	647	9,674	8,460	1,923	1,188	195	1,634	1,386	510	259	4,871	8,213	6,828	84.9	80.7	1,461	812	421	658
Ft. Worth & Denver	July	1,362	2,106	202	2,557	2,795	503	285	30	320	271	47	75	908	1,941	1,598	75.9	57.2	616	198	152	432
	7 mos.	1,362	12,893	954	14,650	13,811	2,772	2,045	209	2,038	2,021	521	568	5,943	12,215	10,890	83.4	78.9	2,455	634	206	663
Colorado & Wyoming	July	39	67		189	283	11	21	2	22	36	12	2	66	115	195	60.8	69.1	74	48	23	29
	7 mos.	39	1,548		2,615	1,849	148	122	14	261	209	87	13	877	1,409	1,154	53.9	62.4	1,206	713	471	236
Delaware & Hudson	July	764	3,200	158	3,511	3,295	504	490	68	672	719	211	106	1,435	2,999	3,051	85.4	92.6	512	384	253	228
	7 mos.	764	25,365	878	27,276	26,269	2,961	3,345	422	4,936	4,603	1,349	743	10,211	20,872	21,100	76.5	80.3	6,404	3,110	3,598	1,730
Delaware, Lack. & Western	July	918	4,316	794	5,816	6,025	378	735	91	918	1,119	346	200	3,217	5,125	5,744	88.1	95.3	691	715	55	474
	7 mos.	918	32,154	5,313	42,482	44,845	5,847	5,099	1,089	7,207	7,485	2,434	1,387	22,026	37,149	40,348	87.4	90.0	5,332	4,657	152	1,474
Denver & Rio Grande Western	July	2,128	5,150	367	5,759	6,077	845	886	148	888	926	326	248	2,070	4,384	4,326	76.1	71.2	1,375	680	661	802
	7 mos.	2,132	40,631	1,663	43,807	40,471	5,458	4,986	725	6,684	6,884	2,243	1,665	14,322	30,288	28,267	69.1	69.8	13,519	7,415	6,268	5,960
Detroit & Toledo Shore Line	July	50	521		573	437	63	48	4	72	63	24	16	213	382	340	66.6	77.8	191	69	21	5
	7 mos.	50	4,475		4,804	3,922	440	439	27	603	496	167	145	1,657	2,967	2,696	61.8	68.7	1,836	677	390	188
Detroit, Toledo & Ironton	July	465	1,552		1,612	1,339	245	184	27	372	284	148	46	490	1,248	1,038	76.8	77.5	475	125	252	203
	7 mos.	465	12,852		13,524	9,421	1,853	1,438	199	2,854	2,427	997	387	3,597	9,365	7,944	69.3	84.3	4,158	791	3,059	932
Duluth, Miss. & Iron Range	July	557	3,130	1	3,689	6,485	532	506	75	556	599	209	16	1,182	2,580	2,823	70.0	43.5	1,109	702	381	3,142
	7 mos.	557	20,856	6	24,478	16,480	3,626	3,483	503	4,207	4,405	1,355	92	7,755	17,518	16,078	71.6	97.6	6,959	4,410	2,391	1,161
Duluth South Shore & Atl	July	544	688	2	739	665	133	115	10	114	92	26	36	229	537	495	72.6	74.4	202	51	115	124
	7 mos.	544	4,089	16	4,288	3,699	815	732	72	794	708	183	232	1,440	3,460	3,289	80.7	88.9	828	272	443	128

(Continued on page 821)

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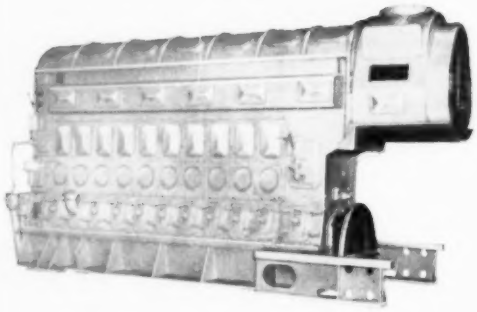

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Drop forged fittings for wire rope-chain

REVENUES AND EXPENSES OF RAILWAYS

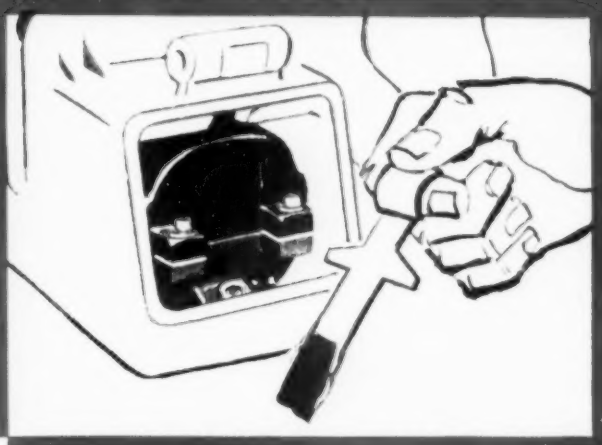
(Dollar figures are stated in thousands; i.e., with last three digits omitted)

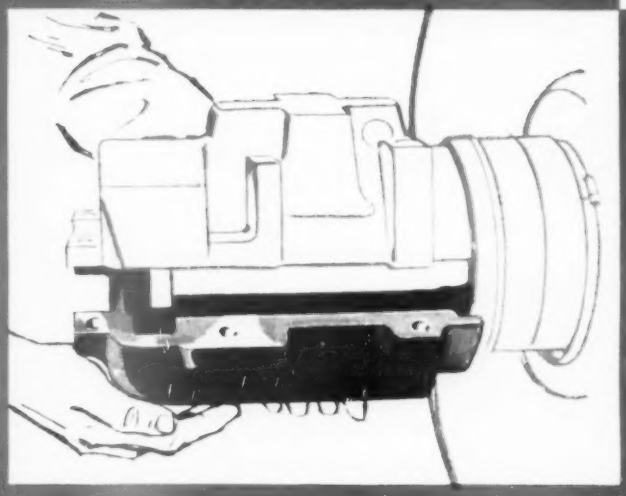
MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1959

Name of Road		Average mileage operated during period	Operating Revenues — Freight	Passenger	Total (inc. misc.) 1959	Total (inc. misc.) 1958	Operating Expenses — Maint. Way and Structures: Total 1959	Maint. Way and Structures: Total 1958	Maint. Way and Structures: Deprec. and Retirements	Maint. Equipment: Total 1959	Maint. Equipment: Total 1958	Maint. Equipment: Deprec. and Retirements	Traffic	Transportation	Total 1959	Total 1958	Operating ratio 1959	Operating ratio 1958	Net from railway operation	Railway tax accruals	Net Railway operating income 1959	Net Railway operating income 1958
Duluth, Winnipeg & Pacific	July	175	498		503	427	152	92	6	63	66	1	7	194	426	356	84.8	83.4	77	49	—54	—32
	7 mos.	175	3,382	4	3,420	3,453	698	561	35	416	432	9	53	1,272	2,516	2,351	73.6	68.0	904	295	21	238
Elgin, Joliet & Eastern	July	205	2,214		2,394	3,261	358	251	29	647	719	54	43	1,302	2,700	2,546	93.3	78.1	194	233	—13	422
	7 mos.	205	24,523		32,873	25,065	2,254	1,759	198	5,755	7,394	772	309	12,407	23,158	20,740	70.4	89.9	9,716	5,000	2,545	230
Erie	July	2,199	10,717	578	12,493	11,845	1,878	1,369	228	2,199	2,017	546	332	6,540	11,745	10,676	94.9	90.1	749	1,255	—1,292	—782
	7 mos.	2,200	81,482	3,811	92,876	86,201	10,443	9,466	1,594	15,027	13,696	3,798	2,542	44,373	77,788	73,405	83.8	85.2	15,088	8,206	1,638	—927
Florida East Coast	July	572	1,673	312	2,160	2,235	328	364	48	424	466	118	88	969	1,972	2,083	91.3	93.2	188	213	—168	—211
	7 mos.	572	15,646	3,088	20,598	21,000	2,990	2,842	332	3,990	3,823	823	623	7,980	16,836	16,482	81.7	78.5	3,762	1,460	684	1,388
Georgia Railroad	July	321	548	19	646	622	81	87	8	124	106	35	40	323	600	586	92.9	91.0	46	45	13	48
	7 mos.	321	3,981	106	4,731	4,434	671	597	60	869	768	244	284	2,203	4,290	3,955	91.1	89.2	421	277	234	382
Georgia & Florida	July	321	250		256	263	77	64	3	42	34	8	23	95	256	220	100.0	83.5		21	—42	5
	7 mos.	321	2,031		2,680	1,852	541	519	27	292	248	56	160	655	1,789	1,621	86.9	87.5	291	127	—26	32
Grand Trunk Western	July	951	4,300	268	5,002	3,851	736	742	63	753	748	108	93	2,472	4,315	4,083	86.3	106.0	687	434	—439	—1,168
	7 mos.	951	31,499	1,499	36,003	31,212	4,820	4,920	511	6,472	5,965	778	671	17,377	31,113	29,223	86.4	93.6	4,890	2,744	—2,029	—4,452
Great Northern	July	8,293	19,515	1,202	22,373	21,552	4,648	4,215	322	4,416	3,675	875	560	8,135	18,778	17,397	83.9	80.7	3,595	2,058	1,068	1,915
	7 mos.	8,293	129,146	5,794	145,382	129,770	25,702	21,445	2,180	27,810	27,167	6,090	3,965	52,456	115,194	109,467	79.3	84.4	29,988	17,251	10,869	6,832
Green Bay & Western	July	219	411		421	366	85	100	5	43	33	9	29	127	309	310	73.5	84.8	111	52	18	—1
	7 mos.	219	2,710		2,769	2,707	426	510	32	328	346	62	199	853	1,990	2,059	71.8	75.3	780	392	197	182
Gulf, Mobile & Ohio	July	2,752	6,097	250	6,802	6,636	908	940	70	1,366	1,223	303	307	2,371	5,316	5,244	78.1	79.0	1,486	727	442	501
	7 mos.	2,752	43,044	1,604	47,906	45,435	6,442	6,378	528	9,565	9,485	2,095	2,135	16,172	36,923	37,000	77.1	81.4	10,983	4,923	3,127	2,146
Illinois Central	July	6,439	17,929	2,045	22,319	20,955	3,391	3,219	429	3,903	3,764	800	660	8,596	17,639	17,192	79.0	82.0	4,680	2,690	1,600	1,212
	7 mos.	6,439	128,224	12,790	156,292	148,061	23,356	21,136	2,822	29,560	28,240	6,018	4,463	60,823	126,276	121,459	80.8	82.0	30,016	15,740	9,968	9,108
Illinois Terminal	July	334	906		980	1,015	125	123	3	251	147	31	47	368	846	739	86.4	72.9	134		18	84
	7 mos.	334	5,603		6,214	6,599	742	770	20	1,380	986	215	341	2,589	5,367	5,002	86.4	75.8	847	157	58	800
Kansas City Southern	July	891	3,371	101	3,819	3,320	323	249	47	560	410	112	98	1,233	2,343	1,951	61.3	58.8	1,476	587	625	610
	7 mos.	891	23,862	507	26,881	24,739	3,145	1,927	332	3,613	3,376	782	686	8,218	15,862	14,687	57.9	59.4	11,319	4,661	6,743	4,293
Kansas Oklahoma & Gulf	July	327	493		494	392	75	73	7	35	29	12	34	94	267	260	54.1	66.4	227	103	86	49
	7 mos.	327	3,388		3,403	3,017	435	475	53	250	194	83	244	673	1,804	1,741	53.0	57.7	1,600	692	583	472
Lake Superior & Ishpeming	July	160	371		458	562	223	77	12	76	55	35	3	117	442	275	96.5	49.0	16	45	14	249
	7 mos.	160	2,342		2,865	1,772	643	414	79	471	482	205	15	754	2,021	1,590	70.5	89.7	844	847	411	47
Lehigh & Hudson River	July	96	263		263	246	32	37	2	31	31	8	15	109	203	198	77.1	80.5	60	26	1	—4
	7 mos.	96	1,972		1,974	1,849	219	240	18	209	259	58	113	783	1,439	1,474	72.9	79.7	536	222	68	38
Lehigh & New England	July	177	463		468	556	64	66	7	183	149	46	18	211	524	510	112.1	91.7	57	36	33	125
	7 mos.	177	3,426		3,462	3,745	442	442	48	1,131	938	353	135	1,450	3,506	3,350	103.5	89.5	44	235	628	815
Lehigh Valley	July	1,127	3,620	146	3,957	4,474	525	538	117	680	820	147	137	2,427	3,999	4,322	101.1	96.6	42	485	—527	—589
	7 mos.	1,128	29,432	1,142	32,538	32,718	3,942	4,469	700	5,799	5,796	1,299	987	17,313	29,665	30,632	91.2	93.6	2,873	3,196	1,512	3,175
Long Island	July	344	1,020	4,677	5,894	5,901	863	782	110	1,163	1,064	169	55	2,945	5,265	4,939	89.3	83.7	629	417	—27	401
	7 mos.	344	7,385	31,156	39,871	39,947	5,647	5,632	702	7,726	7,739	1,180	319	20,434	35,588	34,886	89.3	89.3	4,284	2,628	203	284
Louisiana & Arkansas	July	746	1,970	45	2,121	1,839	223	169	20	314	273	98	88	730	1,433	1,251	67.6	68.0	688	374	225	204
	7 mos.	746	13,728	292	14,736	13,369	1,394	1,370	142	2,078	2,080	689	558	4,739	9,321	9,230	63.2	66.5	5,416	2,779	1,938	1,622
Louisville & Nashville	July	5,697	15,710	884	17,899	17,657	2,815	2,709	299	3,762	3,664	1,112	519	7,730	15,635	15,421	87.4	87.3	2,264	1,983	849	1,123
	7 mos.	5,697	119,543	4,924	134,581	126,853	18,863	19,063	2,115	28,145	27,178	7,780	3,478	53,014	109,774	109,611	81.6	86.4	24,807	18,016	10,136	8,749
Maine Central	July	944	1,649	69	1,848	1,863	359	383	33	342	316	84	30	735	1,580	1,615	85.5	86.7	268	170	98	72
	7 mos.	944	13,475	393	14,733	15,260	2,590	2,676	198	2,655	2,695	587	210	5,601	11,916	12,149	80.9	79.6	2,817	1,432	1,003	1,085
Minneapolis & St. Louis	July	1,391	1,911	4	1,969	1,897	336	333	29	338	315	101	119	663	1,603	1,525	81.4	80.4	366	209	145	159
	7 mos.	1,391	12,454	8	12,865	13,369	1,997	1,964	213	2,320	2,082	707	829	4,566	10,756	10,101	83.6	79.5	2,109	1,219	843	914
Minn., Northfield & Southern	July	77	318		334	359	24	26	2	35	41	13	37	90	224	225	67.2	62.9	109	56	47	53
	7 mos.	77	2,532		2,651	2,553	156	151	17	289	277	89	226	687	1,601	1,475	60.4	57.8	1,049	579	393	426
Minn., St. P. & S. Ste. Marie	July	3,222	3,465	164	3,835	3,346	796	752	49	645	525	136	126	1,433	3,232	3,009	84.3	89.9	603	339	147	—91
	7 mos.	3,222	22,323	427	24,064	23,111	4,601	4,737	364	5,037	4,684	981	781	9,925	21,802	21,103	86.6	91.3	2,262	1,926	—99	—227
Missouri Illinois	July	172	473		478	388	21	90	4	88	84	40	11	172	306	323	64.1	83.2	172	150	79	46
	7 mos.	172	3,187		3,219	2,722	305	483	35	638	619	263	94	895	2,025	2,052	62.9	75.4	1,194	898	643	432
M.-K.-T. Lines	July	2,918	4,373	97	4,916	5,325	571	451	88	956	1,042	263	180	1,835	3,752	3,908	76.3	73.4	1,364	357	273	372
	7 mos.	2,918	31,912	513	35,355	35,203	4,040	3,693	616	7,163	6,498	1,828	1,290	12,374	26,421	26,429	74.7	75.1	8,933	2,408	2,489	2,433
Missouri Pacific	July	9,423	23,653	1,223	27,230	24,903	3,977	4,031	356	4,427	4,251	1,087	713	10,250	20,489	19,640	75.2	78.9	6,741	2,660	2,711	2,517
	7 mos.	9,479	155,753	6,374	178,700	166,536	24,062	25,434	2,348	30,583	29,271	7,586	4,806	68,748	135,252	130,811	75.7	78.5	43,448	14,715	19,307	17,407
Monon	July	541	1,563	27	1,694	1,557	281	243	20	294	285	77	104	642	1,424	1,412	84.1	90.7	270	117	93	51
	7 mos.	541	10,675	266	11,764	11,275	1,660	1,489	152	2,139	1,979	535	719	4,787	10,023	9,615	85.2	85.3	1,742	640	632	524
Monongahela	July	177	342		345	218	71	65	11	49	51	11	1	134	266	248	76.9	113.9	80	17	36	—120
	7 mos.	177	2,873		2,891	2,667	463	462	87	386	392	77	6	1,223	2,212	2,046	76.5	76.7	680	198	215	—333
New York Central	July	10,439	42,372	6,436	56,510	50,728	5,747	5,665	1,100	11,100	9,700	2,464	895	26,661	47,405	45,338	83.9	89.4	9,104	6,945	1,302	1,411
	7 mos.	10,442	314,076	41,105	412,795	365,910	44,252	41,661	7,590	75,700	66,700	16,725	7,345	193,026	341,937	325,385	82.8	88.4	70,859	39,675	19,543	—9,298
Pitts. & Lake Erie	July	221	2,065	35	2,200	2,557	429	421	67	767	834	330	57	1,008	2,462	2,401	111.9	93.9	—262	336	442	777
	7 mos.	221	20,671	242	22,079	17,082	2,682	3,042	413	6,500	6,201	2,278	456	8,151	19,255	18,580	87.2	108.8	2,824	4,016	5,928	3,322
New York, Chic. & St. Lo	July	2,170	10,939	168	11,709	10,975	1,516	1,289	192	2,172	1,768	457	284	4,868	9,333	8,524	79.7	77.7	2,376	1,966	954	853
	7 mos.	2,173	86,421	979	90,804	77,756	9,989	9,088	1,149	14,928	13,483	3,219	2,464	33,850	64,644	60,109	71.2	77.3	26,160	12,761	10,579	6,523
New York, N. H. & Hartford	July	1,762	6,571	3,812	11,973	12,156	1,582	1,501	279	1,855	1,905	519	250	5,807	10,394	10,452	86.8	86.0	1,579	1,097	889	610
	7 mos.	1,762	47,523	27,357	86,818	85,263	10,176	10,354	2,000	12,834	13,585	3,314	1,679	41,734	73,062	73,468	84.2	86.2	13,756	6,914	—3,138	—3,858
New York Connecting	July	21	286		318	294	73	138	25	19	14			88	183	238	57.7	81.0	134	86	32	—56
	7 mos.	21	2,207		2,396	2,495	424	786	177	97	118			619	1,165	1,549	48.6	62.1	1,231	621	448	175
New York, Sus. & Western	July	100	269	16	302	303	48	38	9	45	51	11	9	167	299	297	99.0	97.9	3	36	—76	—57
	7 mos.	105	2,140	126	2,368	2,409	289	272	43	374	388	74	61	1,213	2,144	2,170	90.5	90.1	225	219	—258	—249

(Continued on page 84)

check the oil level
once a year...





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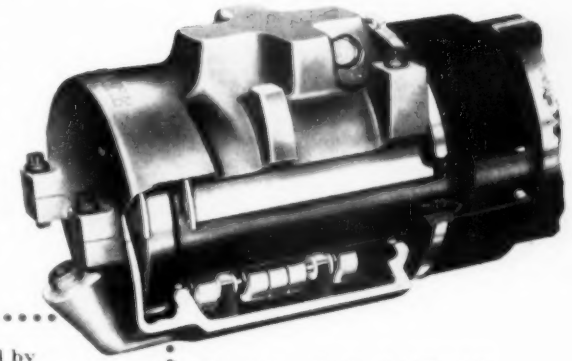

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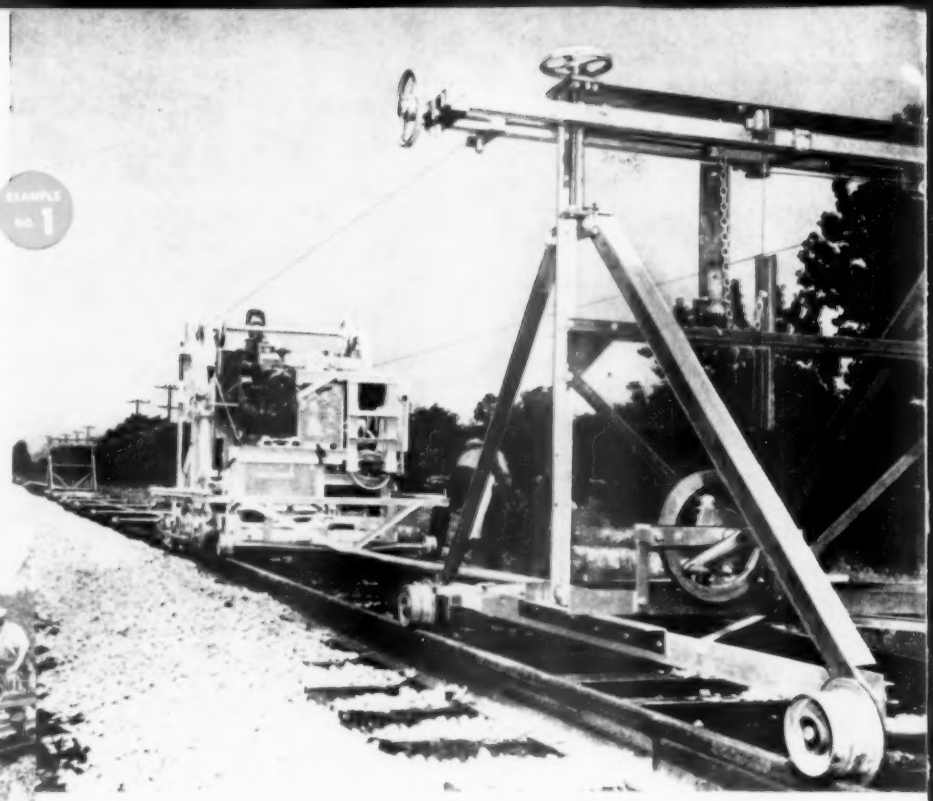
REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1959

Name of Road		Average mileage operated during period	Operating Revenues — Freight	Passg.	Total inc. misc. 1959	Total inc. misc. 1958	Operating Expenses — Maint. Way and Structures — Total 1959	Maint. Way and Structures — Total 1958	Maint. Way and Structures — Deprec. and Retirements	Maint. Equipment — Total 1959	Maint. Equipment — Total 1958	Maint. Equipment — Deprec. and Retirements	Traffic	Transportation	Total 1959	Total 1958	Operating ratio — 1959	Operating ratio — 1958	Net from railway operation	Railway tax accruals	Net Railway operating income 1959	Net Railway operating income 1958
Norfolk & Western	July	2,138	13,191	261	14,215	14,793	1,701	1,859	357	2,610	2,577	1,159	361	4,249	9,684	10,056	68.1	68.9	4,531	2,137	3,364	3,088
	7 mos.	2,138	113,056	1,488	120,151	113,693	13,073	15,576	2,501	20,760	23,913	7,730	2,471	33,939	74,869	82,758	62.3	72.8	45,282	25,567	28,471	17,447
Norfolk Southern	July	592	743		758	734	17	141	17	141	128	40	48	252	696	665	92.1	90.6	59	46	5	1
	7 mos.	592	5,481		5,566	5,014	1,339	1,245	91	914	870	232	356	1,847	4,895	4,547	87.9	90.7	672	363	113	68
Northern Pacific	July	6,828	14,689	763	16,632	15,300	3,179	2,218	493	2,621	2,501	769	406	6,240	13,438	11,760	80.8	76.9	3,195	2,123	1,429	2,102
	7 mos.	6,828	94,091	3,463	105,022	95,665	16,343	13,508	2,618	19,160	19,335	5,302	2,940	41,641	86,578	81,328	82.4	85.0	18,444	12,891	7,501	6,248
Northwestern Pacific	July	328	1,063	1	1,073	1,059	160	213	14	87	78	3	6	369	647	657	60.3	62.1	425	154	54	93
	7 mos.	328	8,077	4	8,142	6,557	1,491	1,859	148	596	538	18	87	2,364	4,684	4,937	57.5	73.5	3,455	1,336	757	135
Pacific Electric	July	361	1,088		1,216	1,098	179	192	24	87	68	4	20	618	981	892	80.7	81.2	235	140	—54	—2
	7 mos.	360	7,490		8,517	7,324	1,300	1,209	166	387	428	25	147	3,966	6,511	6,119	76.5	83.6	2,006	865	153	343
Pennsylvania	July	9,920	54,741	9,124	72,646	63,136	7,086	7,193	1,452	14,816	12,553	2,954	1,220	32,872	60,212	56,593	82.9	89.6	12,435	6,238	1,297	—2,620
	7 mos.	9,920	411,137	62,191	534,467	469,739	52,611	53,920	10,219	107,199	96,116	20,813	8,651	241,492	439,665	419,013	82.3	89.2	94,802	39,462	21,047	—9,966
Penn.-Reading S.S. Lines	July	338	521	192	747	825	227	221	83	134	106	26	7	534	947	893	128.4	108.3	—210	89	—494	—317
	7 mos.	351	3,956	621	4,706	4,628	1,638	1,482	564	909	846	181	58	3,414	6,389	6,064	135.8	131.0	1,684	499	—3,302	—2,961
Piedmont & Northern	July	126	389		399	338	46	49	5	32	30	10	32	90	237	222	59.5	65.7	162	84	33	29
	7 mos.	126	3,251		3,317	2,846	298	330	32	239	194	66	217	624	1,621	1,526	48.9	53.6	1,696	865	489	373
Pittsburgh & West Virginia	July	132	526		531	533	147	150	25	166	150	45	66	207	643	636	121.1	119.4	—112	Cr.61	—41	—22
	7 mos.	132	5,261		5,317	4,601	1,024	934	173	1,131	1,034	317	537	1,613	4,747	4,392	89.1	95.5	580	278	390	272
Reading	July	1,303	6,772	475	7,826	7,475	1,095	1,039	192	1,443	1,437	478	191	3,869	7,073	6,936	90.4	92.8	753	63	309	394
	7 mos.	1,303	56,411	3,539	64,166	61,070	7,937	8,775	1,362	12,363	11,387	3,514	1,358	28,476	53,406	53,728	83.2	88.0	10,760	3,339	4,711	3,903
Richmond, Fred. & Potomac	July	118	1,132	469	1,889	1,849	172	140	27	290	266	67	27	700	1,524	1,318	70.1	71.3	565	358	153	149
	7 mos.	118	8,973	3,008	14,243	13,737	1,043	1,187	142	2,018	1,984	462	208	5,057	9,442	9,630	66.3	70.1	4,801	2,771	1,388	1,127
Rutland	July	391	325		351	359	82	80	8	63	46	18	28	162	364	341	103.8	95.0	—13	—33	—47	—10
	7 mos.	391	2,548		2,735	2,631	542	491	62	424	412	124	214	1,117	2,489	2,414	91.0	91.8	246	207	3	—11
St. Louis-San Francisco	July	4,558	9,155	274	10,211	9,613	1,604	1,517	174	1,817	1,541	606	361	4,073	8,468	7,869	82.9	81.9	1,743	757	779	921
	7 mos.	4,573	63,992	1,533	70,481	63,539	10,944	8,971	1,267	11,987	10,922	4,255	2,494	27,306	56,779	53,075	80.6	83.5	13,682	5,549	6,930	5,453
St. Louis-S. F. & Texas	July	143	416	4	446	435	28	51	4	30	21	1	25	160	255	255	57.1	58.5	191	77	54	54
	7 mos.	143	2,879	22	3,064	2,582	179	319	28	191	174	8	163	1,073	1,689	1,791	55.1	69.4	1,374	546	407	134
St. Louis Southwest. Lines	July	1,556	5,271	9	5,377	4,795	598	686	76	677	663	192	192	1,809	3,463	3,323	64.4	69.3	1,914	965	856	737
	7 mos.	1,556	37,873	40	38,816	34,153	4,152	4,805	525	4,594	4,789	1,329	1,326	12,730	24,254	23,867	63.0	69.1	14,262	6,420	6,078	4,938
Savannah & Atlanta	July	144	332		346	284	49	50	2	66	56	19	15	118	260	237	75.2	83.5	86	41	39	23
	7 mos.	144	2,269		2,374	2,184	381	429	12	450	402	135	118	776	1,812	1,740	76.4	79.7	561	239	278	265
Seaboard Air Line	July	4,147	9,982	1,270	12,225	11,528	1,559	1,788	211	2,261	2,529	705	455	4,760	9,747	10,012	79.7	86.8	2,479	1,099	1,316	1,259
	7 mos.	4,147	79,481	7,908	94,637	90,017	11,935	12,798	1,665	17,322	18,059	4,925	3,180	34,040	71,427	72,065	75.5	80.1	23,209	10,452	11,311	10,340
Southern Railway	July	6,269	19,528	1,105	22,246	19,544	2,466	2,477	330	3,823	3,586	943	516	8,248	15,331	14,597	68.9	80.4	6,915	3,230	3,233	2,443
	7 mos.	6,269	138,965	6,225	156,854	143,001	20,688	20,998	2,224	26,631	24,860	6,650	3,428	49,639	109,049	106,395	69.5	74.4	47,785	21,498	21,979	20,249
Alabama Great Southern	July	328	1,147	63	1,347	956	198	248	34	369	383	82	42	502	1,218	1,257	90.5	131.5	129	107	20	—433
	7 mos.	328	8,677	304	9,953	8,686	1,784	1,741	248	2,317	2,144	574	283	3,461	8,591	8,193	86.3	94.3	1,363	686	419	—304
Cinn., N. O. & Tex. Pac	July	337	2,848	126	3,166	2,693	514	613	69	696	684	222	88	869	2,362	2,482	74.6	92.2	804	400	604	21
	7 mos.	337	21,878	559	23,854	21,119	4,037	4,181	517	5,023	4,690	1,556	1,570	6,208	17,216	16,910	72.5	80.1	6,618	3,002	4,455	3,056
Georgia Southern & Florida	July	397	751	42	854	733	96	112	12	75	89	11	24	272	531	592	62.1	80.8	324	119	69	—72
	7 mos.	397	5,206	238	6,014	5,418	885	1,117	77	559	562	74	161	1,876	3,910	4,146	65.0	76.6	2,104	457	448	—273
New Orleans & Northeastern	July	283	865	45	975	1,047	172	181	21	209	397	85	28	250	742	944	76.1	90.2	233	166	115	51
	7 mos.	283	6,081	319	6,889	6,765	1,416	1,278	158	1,415	1,386	588	189	1,589	5,377	5,029	79.0	74.8	1,432	991	706	718
Southern Pacific	July	8,068	43,295	3,109	49,481	45,855	5,707	5,554	627	10,905	9,692	2,499	767	19,236	38,988	36,469	78.7	79.5	10,524	5,370	2,948	3,972
	7 mos.	8,069	292,197	15,691	326,089	288,126	42,290	35,856	3,400	69,926	63,689	17,213	5,636	122,326	250,106	233,930	76.7	81.2	75,983	38,326	30,623	25,508
Texas & New Orleans	July	4,162	11,958	403	12,071	11,393	1,908	1,927	155	1,795	1,630	203	254	4,574	9,161	8,676	75.9	76.2	2,911	1,206	499	576
	7 mos.	4,164	76,743	2,089	83,132	77,816	13,590	12,973	1,424	11,728	11,048	1,371	1,791	30,199	61,593	59,286	74.1	76.2	21,540	8,905	4,786	3,403
Spokane International	July	150	281		289	294	43	63	4	10	29	9	5	80	148	191	51.3	65.1	141	42	71	59
	7 mos.	150	2,068		2,129	2,322	319	434	23	183	248	75	36	526	1,140	1,400	53.6	60.3	988	439	379	395
Spokane, Portland & Seattle	July	936	2,582	133	2,918	2,809	501	478	57	460	459	129	58	1,071	2,204	2,059	75.5	73.3	714	322	325	390
	7 mos.	936	17,875	572	19,730	17,871	3,194	3,113	422	3,287	3,164	898	244	7,069	13,640	14,060	74.2	78.7	5,090	2,075	2,527	1,889
Tennessee Central	July	284	304	1	319	326	44	32	5	48	47	22	16	124	256	238	80.2	73.1	63	21	2	29
	7 mos.	284	2,311	3	2,404	2,291	380	290	37	361	340	151	123	855	1,808	1,741	75.2	76.0	596	161	159	113
Texas & Pacific	July	1,831	5,034	413	6,041	5,709	870	830	102	1,080	1,056	279	207	2,616	5,144	4,912	88.2	86.0	897	355	151	270
	7 mos.	1,831	37,839	2,266	44,194	41,749	5,979	5,752	711	7,424	7,488	1,901	1,429	18,151	35,561	33,958	80.5	81.3	8,634	3,378	2,299	1,757
Texas Mexican	July	161	271		321	363	62	60	6	36	37	11	13	120	255	233	79.3	64.2	67	12	—8	41
	7 mos.	161	2,003		2,225	2,291	431	400	41	236	236	80	87	638	1,544	1,450	69.4	63.2	681	267	132	250
Toledo, Peoria & Western	July	239	605		629	575	83	75	7	45	47	13	45	167	381	360	60.5	62.5	249	109	72	146
	7 mos.	239	4,322		4,459	4,259	834	823	47	355	386	88	352	1,185	2,726	2,633	61.1	61.8	1,734	739	814	559
Union Pacific	July	9,743	37,950	3,644	45,094	43,456	5,240	6,279	568	8,186	7,991	2,208	1,172	16,333	33,398	33,132	74.1	76.2	11,696	6,339	2,954	2,911
	7 mos.	9,749	261,244	16,155	298,679	270,268	36,581	37,710	4,048	57,504	51,967	15,242	8,798	104,569	223,442	208,880	74.8	77.3	75,237	42,142	20,531	16,880
Virginian	July	608	2,889		3,042	2,903	397	393	71	755	570	285	68	725	2,049	1,874	67.4	64.6	993	486	707	670
	7 mos.	608	26,072		27,125	28,325	3,559	3,153	594	5,243	4,918	1,986	442	5,607	15,761	15,144	58.1	53.5	11,365	5,893	7,388	7,441
Wabash	July	2,392	8,974	488	10,421	9,177	1,276	1,171	146	1,440	1,424	448	338	4,792	8,314	7,757	79.8	84.5	2,107	730	505	391
	7 mos.	2,392	61,285	2,913	70,995	63,160	8,720	7,547	921	10,335	10,052	3,132	2,510	32,718	57,421	52,521	80.9	83.2	13,574	4,553	3,490	2,272
Ann Arbor	July	294	764		808	738	108	87	7	164	147	45	30	379	710	658	87.9	89.2	98	63	5	36
	7 mos.	294	5,052		5,149	4,966	630	540	46	1,121	1,093	289	241	2,544	4,702	4,498	91.3	90.6	447	391	—90	31
Western Maryland	July	844	2,715		2,982	3,211	418	484	45	802	724	301	132	1,222	2,783	2,654	93.3	82.7	198	122	299	643
	7 mos.	844	28,140		29,183	25,424	3,884	3,588	358	5,694	5,336	1,894	891	9,307	21,285	19,945	72.9	78.5	7,898	4,387	5,980	4,967
Western Pacific	July	1,188	3,844	286	4,250	4,306	587	576	82	707	677	216	274	1,682	3,587	3,296	84.4	76.6	664	242	388	618
	7 mos.	1,188	29,248	1,303	31,370	28,372	3,690	4,108	563	4,884	4,732	1,516	1,706	11,175	23,556	22,756	75.1	80.2	7,814	3,420	3,880	3,165
Wisconsin Central	July	1,031	2,652	45	2,897	2,740	455	334	44	435	384	109	111	1,246	2,400	2,105	82.8	76.8	497	224	49	256
	7 mos.	1,031	18,234	154	19,520	18,072	2,691	2,410	303	3,287	3,209	759	707	8,358	16,088	15,255	82.4	84.4	3,432	1,334	817	411



EXAMPLE No. 1

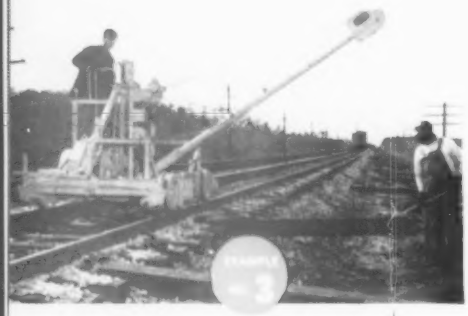
SURFACING OPERATIONS

The Nordberg Tamping Power Jack and Trak-Surfacer team raises track, tamps ties to hold the raise, and provides propulsion power. The Trak-Surfacer uses a stretched wire to form a reference line for the top of the grade rail. Following right after, the Gang Tamper tamps all ties. Then the Trakliner® and Line Indicator line tangent and curve track.

EXAMPLE No. 2

RELAYING OPERATIONS

The Dun-Rite® Gaging Machine and Bronco is the key machine, used with these other Nordberg units: Power Wrench, Self-Propelled Spike Puller, Ballast Router, Self-Propelled Adzing Machine, Rail Drill, Tie Drill and Spike Hammer, for completely mechanized relaying operations.



EXAMPLE No. 3

TIE RENEWAL OPERATIONS

The Nordberg Gandy® is one of the important machines used for reducing tie renewal costs. This efficient unit is used to pull out old ties, insert new ties, pile or load old ties, set machines on or off the track, and distribute new ties. Other Nordberg machines for tie renewal include the Hydraulic Spike Puller and Carriage, Tie Drill and Spike Hammer.

ORGANIZED MECHANIZATION with NORDBERG MECHANICAL MUSCLES will give you maximum maintenance economy

ORGANIZED MECHANIZATION has two vital parts. First, *providing the best combination of equipment to do a given job*, and second, *coordinating that equipment into an efficient working team.*

The advantages of Organized Mechanization, utilizing Nordberg Mechanical Muscles are (1) Single source of responsibility for all machines; (2) Each machine designed and built to work most efficiently with other Nordberg machines; (3) Maximum parts interchangeability between machines; and (4) Training of operators is easier and abilities are readily transferred to operate all machines built and backed by Nordberg.

Illustrated are three examples of the way in which Nordberg Mechanical Muscles are used to make up Organized Mechanization teams for specific maintenance work . . . *to assure better, faster track maintenance operations at the lowest cost.*

See the NORDBERG EXHIBIT featuring ORGANIZED MECHANIZATION at the 42nd Track Maintenance Show in the South Hall of the CHICAGO COLISEUM . . . or write for further information about Nordberg Mechanical Muscles and the challenge of today's maintenance problems.

R958

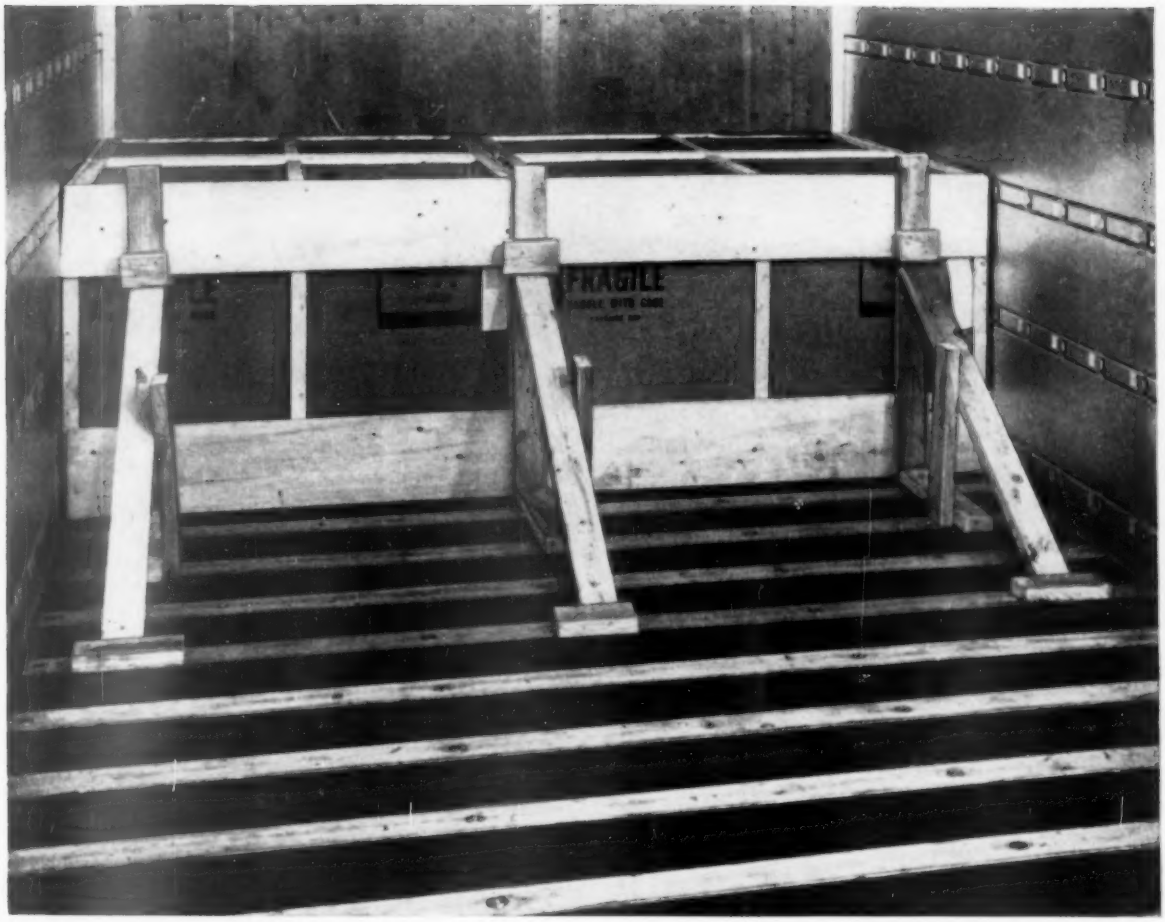
Write For LEASING Plans

NORDBERG MFG. CO., MILWAUKEE 1, WISCONSIN

NORDBERG MACHINERY

NORDBERG

Mechanical Muscles®



Strong, nailable, and Nickel-containing... Republic "50" floors last the life of the car

The car floor you see above is in for a long life on the road – It's made with Republic "50" nickel-copper high strength, low alloy steel!

This flooring was perfected by the Berger Division of Republic Steel for the railroad industry . . . to deliver far better service at ultimately lower cost than other floors including steel.

Republic "50" freight car flooring is much stiffer and more durable; stands up under the heavy impact of lift truck loading; withstands the stresses of weight concentrated on racks and pallets. And the corrosion and abrasion resistance of this nickel-copper steel offer **extra** assurance of long life.

Republic "50" flooring is easy to install and service. It was designed to eliminate many of the difficulties encountered by shippers and railroads.

Last, but not least important, Republic "50" floors are nailable! Blocking can be easily nailed down, because of the combination steel-and-wood construction.

When equipment has to stand up under tough service conditions, a nickel-containing steel has the high strength to do it! For additional information, write Inco for "Nickel Alloys in Railroad Equipment". You'll discover new ways Nickel alloys can help **you** reduce maintenance costs.

The INTERNATIONAL NICKEL COMPANY, Inc.
67 Wall Street INCO New York 5, N. Y.

Here's how Republic "50" floors are constructed. Ordinary nails can be used to fix blocking to the floor. Cars with this type flooring are easier to maintain and stand up under heavy loads.

INCO NICKEL

NICKEL MAKES STEELS PERFORM BETTER LONGER

What's the Labor Outlook?

(*Continued from page 36*)

Ed Gilbert subscribes to the "best defense—good offense" theory). The Engineers are known to be studying a broad rules movement, including a demand for employment of an apprentice engineer on all locomotives. (Attempts by both the BLE and the BLF&E to force employment of additional engine crew personnel have been rebuffed by emergency boards before, in 1943 and 1949.)

Management's approach most likely will involve a uniform movement based on the drive to bring work rules in line with present-day operations.

It's difficult to try to chart any course for the 1959-60 negotiations. Wage talks, under way now, may drag until the rules situation is clarified. Any cross-issue bargaining may be complicated otherwise, since rules negotiations won't start moving for another month and a half minimum.

If the talks deadlock, as expected, mediation could be invoked. Failure to settle then would, in all probability, lead to strike threats and submission of the case—or cases—for emergency board fact-finding.

Under the Railway Labor Act, contract changes and strike action are barred for 30 days following failure of mediation and a subsequent refusal by either party to arbitrate. An emergency board is given 30 days to study the dispute and report to the President (the time may be extended by management-labor agreement). And there's a 30-day ban on contract change or strike action after the board makes its report.

Orderly—but not precipitate—advancement of the disputes could exhaust the provisions of the RLA by sometime next spring.

Right now, opinion on the outcome is split: Some observers contend both sides have gone too far to back down. Others see compromise, with some gains on the rules issue.

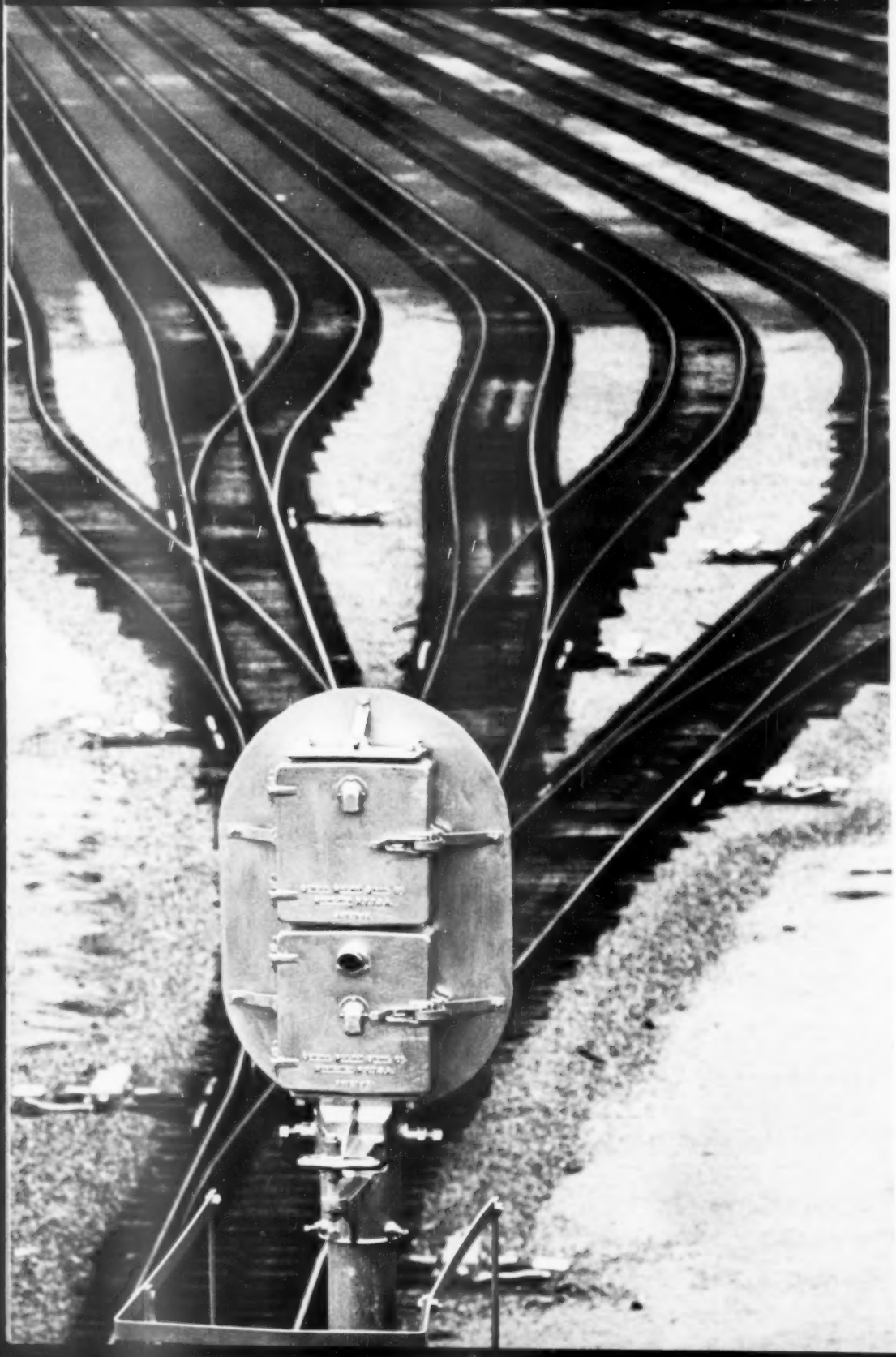
Optimism springs from several sources: Steel's stand on the wage-rules issues; the wage-earner's distaste for unemployment; indications that the public may be fed up with the unions' constant demanding. Specific instances of featherbed practices make interesting reading for the public, and do little to win respect or support for unionism.

In any event, President Eisenhower's refusal to appoint a featherbedding study commission leaves management and labor alone at the bargaining table—in the beginning, at least.

The issues have been clarified—but the basic outlook hasn't changed much from last January: "No easy year lies ahead" (RA, Jan. 19, p. 24).

SPECIAL REPORT

TO THE RAILROAD INDUSTRY OF AMERICA



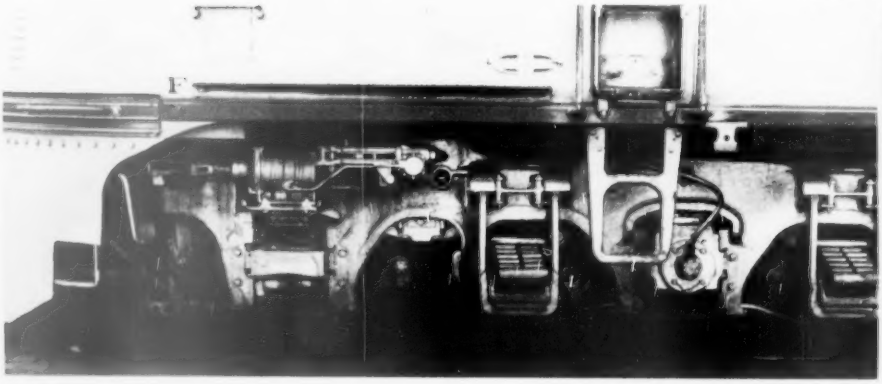
ALUMINUM
COMPANY
OF
AMERICA

MEMO TO RAILROAD MANAGEMENT

"AMERICAN railroads, caught in a life-and-death struggle for their very existence, must pursue every opportunity for greater operating efficiency. We have as our allies an army of industrial engineers and research scientists whose constant quest yields new products and processes almost daily. Our industry is fortunate in having these technological achievements available, for many of them point the way toward life-saving economies in our operation."

D. P. Loomis

PRESIDENT, ASSOCIATION OF AMERICAN RAILROADS



The Erie Railroad's car repair shop at Meadville, Pa., utilizes 100,000 sq ft of Alcoa siding. Not only were initial costs lower than those for protected metal, but permanent freedom from painting will pile up additional economies for the life of the building.

THE VAST, complex and demanding economic problems faced by railroad executives today are too well known to require reiteration here. What may be less well known are the significant steps toward *solving* those problems that have been made possible—*here and now*—by advanced techniques in the fabrication of high-strength aluminum alloys.

We repeat: *here and now*. Practical applications of aluminum to turn losses into profits on American railroads are not just a future promise. In the past 30-odd years, Alcoa has conceived, created and developed special alloys and products for railroad service that have *proved* themselves in practicable and profitable operations. To bring some of these applications to your attention . . . to help *you* convert losses into profits . . . is the sole purpose of our message on the following pages.

Virtually all of these applications are in *use* today on one railroad or another. The tangible savings recorded are based on experiences of practical, successful American railroad executives.

Some of these railroad applications, such as piggyback and containerization operations, are still relatively new. Yet the basic advantages of aluminum in reducing operational costs are—or should be, by now—a well-known and long-recognized story. Only aluminum combines the virtues of strength, light weight, corrosion resistance, long life and—above all—extremely *low maintenance*. Savings through aluminum are limited only by the degree to which your railroad makes *use* of aluminum. These opportunities for economy range from rolling stock and trackside structures to signs, signaling devices and electrical installations.

Maintenance is always an enormous factor in the cost of operating any railroad. In an average month, for instance, eight out of every hundred freight cars are out of service for repairs. It is here that aluminum can make substantial contributions to economy.

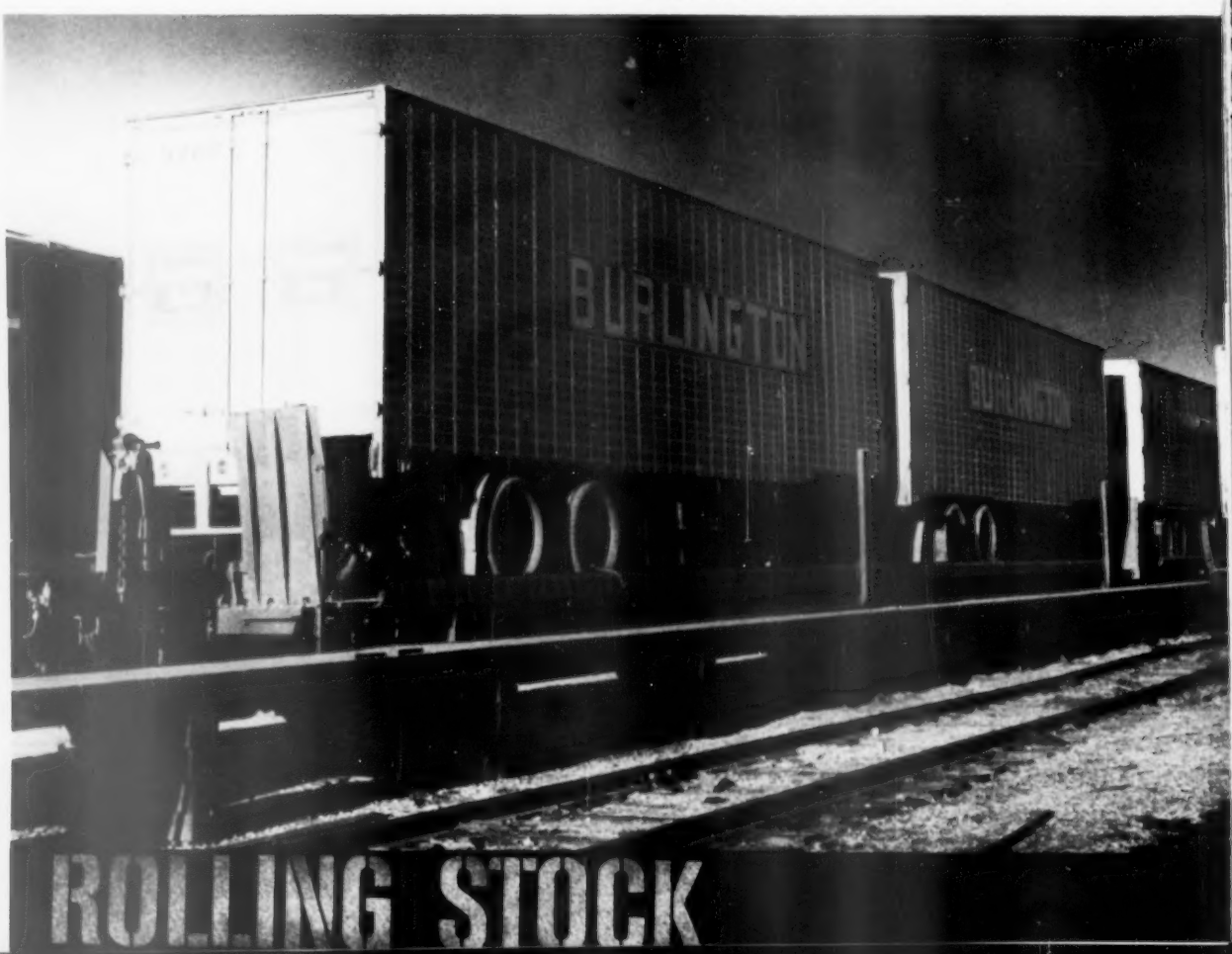
For aluminum — particularly in today's highly rugged and resistant aluminum alloys — is as close to being truly *maintenance-free* as any practical metal can be. On rolling stock, or in any *other* suitable application.

Consider tank cars, for instance. Nearly 4,000 aluminum units are in current service. The oldest have served for nearly 30 years with virtually no maintenance. And what is true of tank cars is, of course, equally true of other rolling stock.

Reduction of dead weight is, naturally, of importance in many classes of railroad service — in particular, the piggyback and containerized service. The Missouri Pacific, noted for the efficiency of their containerized operations, save 5,000 to 6,000 lb on each aluminum container loaded without chassis. In their over-all operation, they point out, net ton miles are as low as 40 to 50 per cent of gross ton miles. Any means, like the use of aluminum, that reduces gross weight without limiting payload, will result in notable dollar savings.

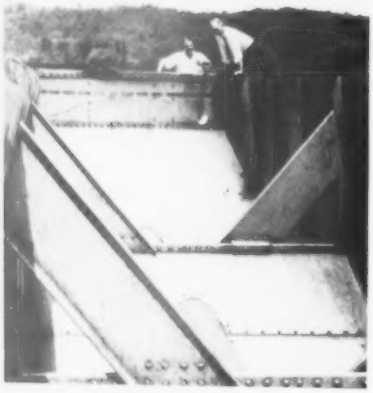
Missouri Pacific's containerized operation (right) saves weight by shipping without chassis, requires fewer chassis than containers, and saves expenses — highway licenses are not required for containers, only for chassis.

Piggyback operation on the Chicago, Burlington & Quincy Railroad (below) is typical of one of the brighter aspects of the current railroad picture. During 1958, while carloadings in general fell off, piggyback loadings rose steadily to 27 per cent above the previous year — and were still rising at year's end. To shippers, aluminum piggyback means speed, economy and substantial savings in loss and damage expenses from rough handling and pilferage.



ROLLING STOCK

Installation of aluminum roof sections on boxcars for the Grand Trunk Western Railroad, two years ago. Careful records show that, so far, these roofs have been maintenance-free and should remain so for at least another 30 years. They have never been painted, and require no paint. Light weight makes them easy to install and a natural for freight car roof repairs on the estimated 145,000 cars requiring maintenance service today. Each aluminum roof adds about 1,400 lb of payload capacity per trip.



All-aluminum hopper car, on Montour Railroad, was built in January, 1946, for coal service. Weight saving of aluminum permitted increase of payload by 230 cu ft or 6.2 tons of coal. Dead weight is 37,000 lb. Car goes through a rotary dumper on the average of twice every three days; has never required an overhaul. Note the rivet heads, flattened by the grinding pressure of the rotary dumper, but after 13 years the rivets are as tight as ever. (New high-strength weldable alloys developed since 1946 allow the option of welded or riveted construction.) Exterior is unpainted, was last cleaned about seven years ago. The Montour Railroad reports that 200 hopper cars built of traditional metals and also purchased in 1946 must go into the shop this year for new sides and bottoms due to corrosion.

ROLLING STOCK

Painting (below) and spraying (above) with commercial paints containing Alcoa Aluminum Pigments, at the Chicago, Burlington & Quincy Road. This railroad first experimented with aluminum pigments about 10 years ago; has used them ever since. No paint hides like aluminum. One coat covers any colored surface with maximum brilliance. An important "plus" is the fact that aluminum paint can be sprayed in narrow areas without spreading to neighboring cars, maintenance men report.

Aluminum boxcar doors on this Rock Island PS-1 were developed by Pullman-Standard's Research and Development Division in cooperation with Alcoa. With this prototype design, a 9-ft-wide door weighing as little as 235 lb can be made with bending strength equal to the strength of a standard steel door of 650 lb. No massive "car door openers," crowbars or sledges are needed to open such a door, even though it is of sufficient size to permit easy access for fork trucks handling palletized loads.

Alcoa® Aluminum Pigments are another example of drastic maintenance savings made possible by modern aluminum products. The aluminum flakes actually overlap to form a metallic armor that protects vital oils, keeps the coating pliant and waterproof in all climates and seasons, requires repainting far less frequently than conventional paints. Moreover, by reflecting back 70 per cent of the sun's heat, aluminum pigments reduce internal temperatures in unrefrigerated cars and greatly reduce the demands on refrigeration equipment in reefers.

Aluminum has suddenly become the most talked about metal in the industry because in today's keen competition for transportation markets, low maintenance and bigger payload have become the key to successful railroading. Low maintenance and light weight

are precisely the features which make aluminum the ideal metal for rolling stock applications. Since 1928, when Alcoa started furnishing metal for tank cars, they have kept careful records of aluminum rolling stock. There has been an ever-increasing trend for American railroads to turn to aluminum for the advantages of increased payload (see chart below). Because of aluminum construction, progressive railroads are building hopper and gondola cars of greater carrying capacity to take advantage of increased payload and low tare weight. Economic studies by Alcoa and major users have shown that the slightly higher initial cost is more than offset by the big increase in payload without the usual increase in dead weight.

SALES TREND FOR ALUMINUM ROLLING STOCK 1926-1959

(These figures include the sale of all types of aluminum rolling stock: tank cars, reefer cars, hopper cars, boxcars, gondola cars and passenger cars.)

YEARS	NUMBER OF CARS
1926-30	38
1931-35	59
1936-40	123
1941-45	397
1946-50	1,103
1951-55	2,103
1956-59	3,296

The Nickel Plate Road is one of the progressive railroads which has used aluminum rolling stock for years. In 1948, the New York, Chicago and St. Louis Railroad built 10 aluminum boxcars at their Frankfort, Ind., shops. All parts fabricated from aluminum were made with existing equipment usually used for steel fabrication. The cars were built for express service and have been making high-speed express runs ever since. An inspection held as this report went to press pronounced these cars absolutely fit and in shape to last 30 years or more. The weight saving in each of these cars amounted to over 4 tons with a payload capacity of 50 tons. This express-speed aluminum boxcar has a payload to dead-weight ratio of approximately 21 to 1.

RIGHT OF WAY

Aluminum signs on Milwaukee Railroad right of way not only save an estimated $70,000 a year — they add an important measure of *safety* as well. Their reflectorized surfaces are highly visible, day and night — and the message film won't delaminate even if punctured or damaged. Even when the reflective sheeting ultimately wears out or loses reflectivity, the Alcoa sign blank itself can be re-used. And if the sign is damaged beyond all repair by some unlikely contingency, its salvage value is still nearly one-third of the original materials cost — much higher than that of any other sign material.

"Excessive maintenance at the highest labor rates in history is the penalty paid by any American railroad that field-paints its signs," according to the chief maintenance engineer of a Class 1 railroad.

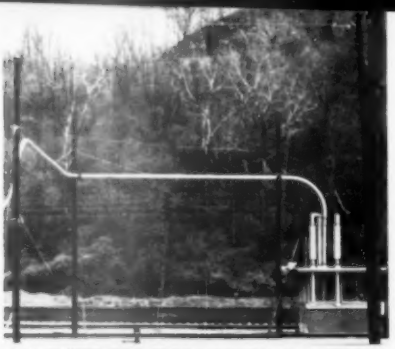
But field-painting of crossbucks and right-of-way signs can be — and *should* be — a woe of the past. New Alcoa signs that require *no* painting can be purchased for the *same* money it used to cost to paint signs . . . and they're entirely *maintenance-free* for years!

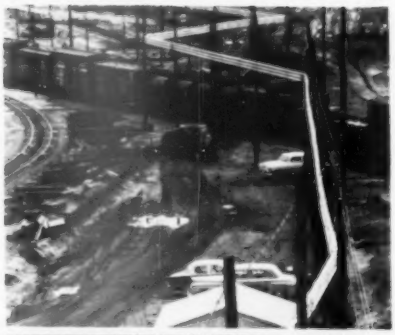
Consider some hard facts and figures from the experience of the Milwaukee Railroad, which first began experimentation with reflectorized aluminum signs in 1954.

In 1955, they began 100 per cent replacement with aluminum signs throughout the system. Today, nearly 100,000 signs are located along 10,000 miles of line. The old wooden signs required about $75,000 of field repairs annually, and another $25,000 for replacement.

The Milwaukee Road has now invested about $80,000 in aluminum signs — and estimates that these will not require attention for at least *12 years*. Annual savings alone: *about $70,000 a year!* These dramatic savings are typical of what aluminum can do.

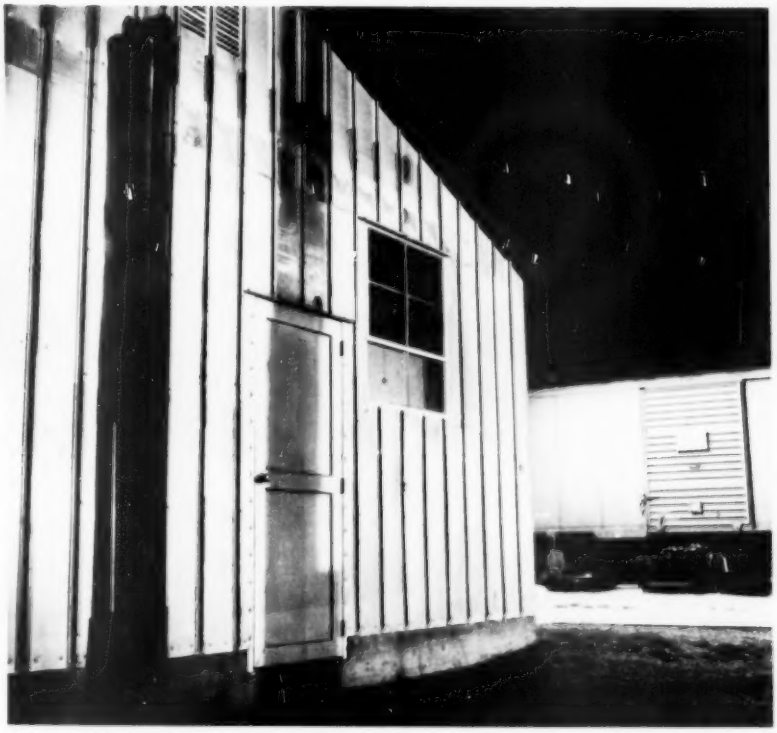
YARD APPLICATIONS





Aluminum pneumatic tubes (left and above) installed by Kelly Systems, Inc., at the new Kansas City yards of the Missouri Pacific — the most modern railroad yards in America, now nearing completion. The finished system, of Alcoa Aluminum 3-in. and 6-in. tubing, will be about three miles long; will be able to transmit the paperwork required to move 3,600 cars every 24 hours. Messages will move from one end of the system to the other in four or five minutes. Only aluminum offers the needed combination of light weight, strength, corrosion resistance and lowest cost for such a system.

Aluminum pigments, coating floodlight towers, standard poles and similar yard installations, combine eye appeal, high protection against weather and corrosion, and excellent visibility. This is a view of the new Kansas City yards of the Missouri Pacific Railroad.



Alcoa Sandwich Wall construction is a field-fabricated, nonload-bearing, industrial wall system. It permits the erection of low-cost, efficiently *insulated* buildings in yards with major advantages of speed and ease of erection, maintenance and performance. Sandwich walls consist of a board of glass fiber insulation with an outer and inner skin of Alcoa Aluminum Industrial Building Sheet. Full details are available on request.

In modern yards and buildings, painters need never touch a single structure made of Alcoa Aluminum. Yet Alcoa Industrial Building Products cost far less than masonry. Buildings made of aluminum stay cooler in summer, warmer in winter. Walkways of Alcoa Aluminum are as strong as steel and weigh as much as 60 per cent less — so supporting structures can be lighter and less costly.

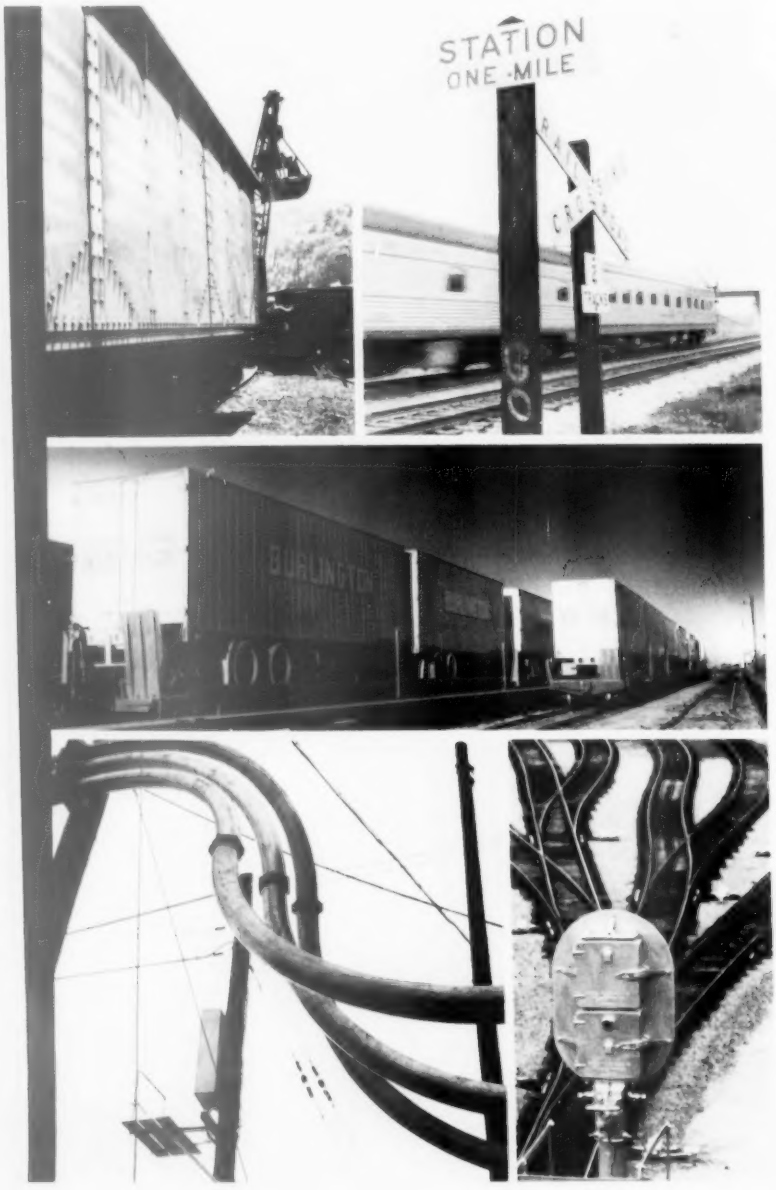
Railings, pneumatic tubes, Alcoa Abrasive Tread Plate and fencings are all natural opportunities to cut down maintenance costs in yards. And Alcoa Aluminum is the ideal material for signal cases: it resists corrosion, can't foul the breakers. The applications on these pages are only a few of many examples of what aluminum can do for *your* yards. There's more information available on request. You need only call on Alcoa to get it.

This booklet has highlighted only a few of many moneysaving applications of aluminum in modern railroads. To cover *all* the applications that have proven themselves would require a gigantic volume indeed.

Since 1925, Alcoa has pioneered in research and development of products for American railroads. With the world's greatest fund of aluminum knowledge and experience, and the world's foremost aluminum research facilities constantly adding to it, Alcoa is your most authoritative source of information and technical assistance.

To make aluminum work better, we've developed special alloys expressly designed for railroad service. We've perfected processes that make aluminum fabrication simple enough for your smallest shops to handle quickly and efficiently. We've trained sales engineers who are experts not merely on aluminum, but on railroads and on railroading problems.

If you'd like to hear more, please don't hesitate to call your local Alcoa sales office and ask for the railroad sales engineer. Or write us about your proposed usage. Aluminum Company of America, 1961-J Alcoa Building, Pittsburgh 19, Pennsylvania.



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*Trademark of Aluminum Company of America

Special Shipping Problems?

TRY ERIE'S SPECIAL EQUIPMENT

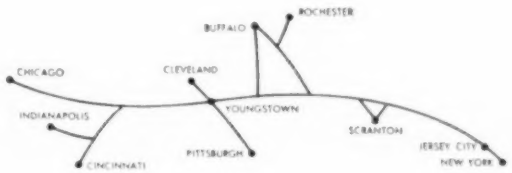
An important aspect of the complete **customer service** provided by your local Erie representative is assistance in analyzing the requirements of your shipments. And where your shipment can be handled more economically or more safely with special Erie equipment, he'll recommend it.

Erie customers regularly profit by using Erie covered hopper cars, heavy duty flat cars, special covered gondolas for coiled sheet steel and tin plate, various types of D-F cars, and Piggy-Back equipment. In fact, Erie's close **customer service** has resulted in the very development of much of this equipment.

When you specify, "Route it Erie", you'll see exactly what Erie **customer service** means to you. It's our way of running a railroad—of matching all Erie operations to your particular needs for more dependable delivery of your shipments.

ERIE

Symbol of dependable **customer service**



Erie Railroad

Dependable Service for the Heart of Industrial America

Containers: 'The Basic Twenty'

Containers in multiples of 20 ft have been recommended by the National Defense Transportation Association's special subcommittee on containerization and standardization.

After nearly a year of deliberation, the subcommittee has urged that containers be standardized at 8-by-8-by-20 ft, or any multiple thereof. This would include simple divisibles of 20, such as 5 and 10.

Subcommittee Chairman Morris Forgash, president of U. S. Freight Co., called the recommended sizes "commercially feasible" and said that his company would have in operation "within 90 days" the prototype model of a special 85-ft Pullman-Standard flat car designed to handle the containers.

[Pullman-Standard confirmed that it has on the drawing board a special flat car designed to handle containers and that, when the prototype model is ready, "we will be glad to have Mr. Forgash experiment with it." Thus U.S. Freight will have "first crack" at the new car, which will incorporate a special container-cushioning device and be suitable for loading and unloading by gantry crane. A Pullman-Standard spokesman felt, however, that 90 days might be too tight a schedule.]

Mr. Forgash also said that he had received "indications from Army personnel that an initial purchase by defense agencies of the recommended lengths [of containers] is being considered as an experiment in encouraging widespread action by private industry."

The "Basic 20"-sized containers would be completely interchangeable among all forms of transportation—rail, truck, ship, or plane—according to the NDTA subcommittee. The group agreed unanimously on its 8-by-8-by-multiple-of-20 recommendation, Chairman Forgash said.

He added that defense officials would back an industry effort at standardization with the hope of building up an adequate supply of interchangeable containers within private industry, should the sudden demands of war require it. Mr. Forgash estimated that a minimum "adequate supply" would be in the neighborhood of 5,000,000 containers.

It was pointed out that one of the reasons the subcommittee recommended the 20-ft multiples was "because it was a size which the Armed Forces apparently need for their front-line operations in the event of a national emergency."

Although NDTA spokesmen seemed satisfied with the results of the subcommittee's study, it was noted that little response to standardization overtures has been received from maritime sources, including shipping association committees now studying the matter.

But Mr. Forgash expressed the belief that, if the government as well as the railroads and trucks adopt the standard sizes, it can't be long before the shipping companies fall into line.

The NDTA subcommittee was comprised of U. S. defense officials, equipment supplier executives and major carrier representatives. Mr. Forgash recommended that it be continued.

Among the members serving on the subcommittee are Champ Carry, president of Pullman, Inc.; Herbert H. Rogge, president of American Car & Foundry; R. H. Anderson, general manager of the Alaska Railroad; William J. Stebler, president of General American Transportation Corp.; J. P. Newell, vice president of the Pennsylvania Railroad; and Roy Fruehauf, of Fruehauf Trailer Co.

NEW Column wear plate with high weldability

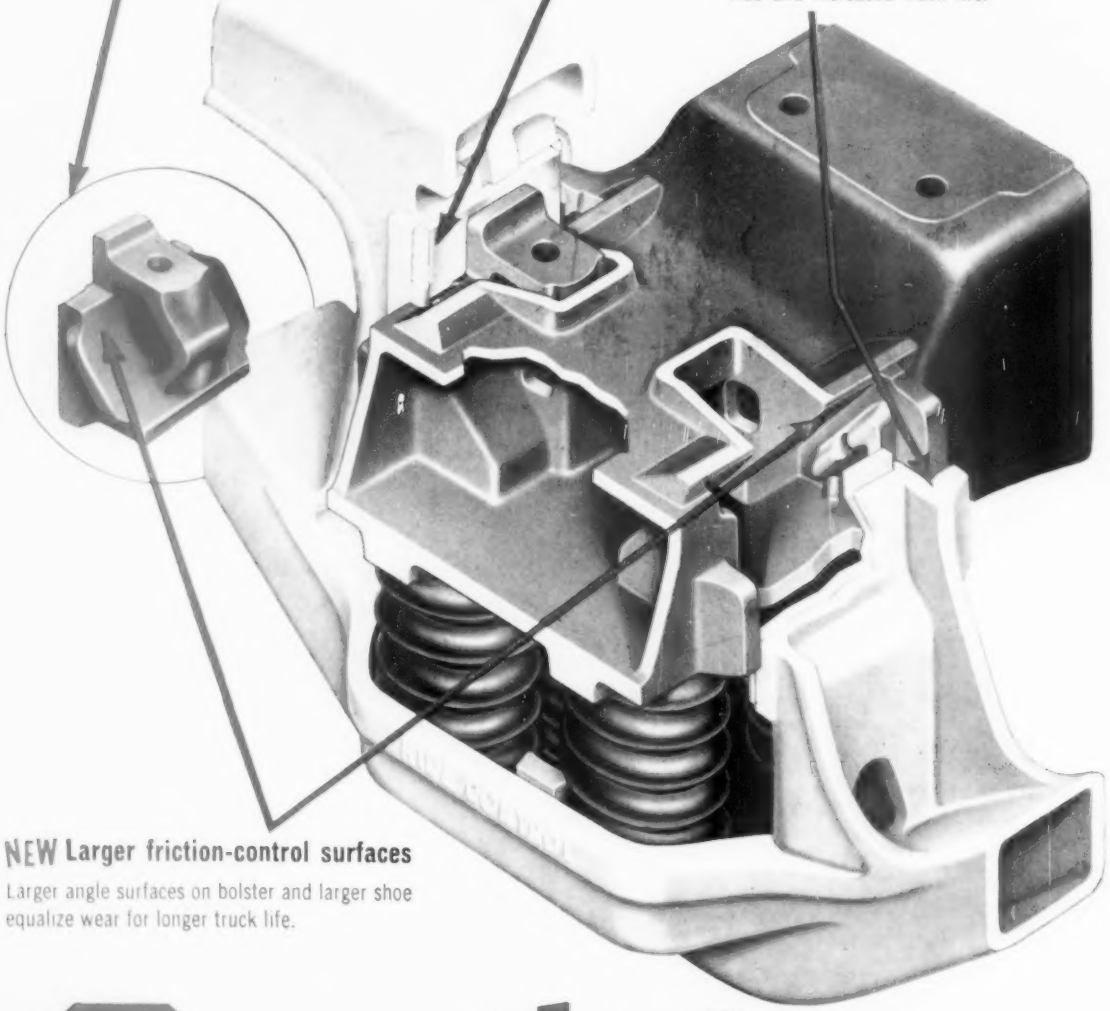
Steel composition and heat treatment developed for wear resistance, yet the plate is readily weldable.

NEW Wing shoe is shell-molded

Larger areas plus ASF's precision casting process that results in smoother surfaces and closer tolerances. New longer-wearing steel, too.

NEW Superior bolster control

Longitudinal, lateral and rotary movement of bolster are under constant control. Ride-Control elements stay in proper position for improved ride and increased truck life.



NEW Larger friction-control surfaces

Larger angle surfaces on bolster and larger shoe equalize wear for longer truck life.

ASF

NEW Ride-Control Truck

AMERICAN STEEL FOUNDRIES

Prudential Plaza, Chicago 1, Illinois

Canadian Manufacturer and Licensee: International Equipment Co., Ltd., Montreal 1, Quebec
Other Foreign Sales: American Steel Foundries, International, S.A., Chicago

New ASF Ride-Control® Truck gives you larger bearing areas, better shoe and bolster action. Result: Longer truck life.

Based on 20 years' experience with Ride-Control Trucks and continuing research, American Steel Foundries has designed the new ASF Ride-Control Truck to answer your needs for a lasting smooth ride. Bearing areas have been increased, critical wear points now last longer than ever. Shoe and bolster interaction has been improved, bolster shift minimized. You get balanced wear with lower maintenance costs because of longer life of the component truck parts. The new ASF Ride-Control Truck has been tested and proved in action on the ASF Service Laboratory Test Train, and is ready to give you even better service.

See it at the Allied Railway Show!

Here is how many railroads are
beating the boxcar shortage

This year the railroad industry is faced with one of the greatest boxcar shortages in recent years. Even the healthy increase in new car construction cannot meet the demand for several years.

The best immediate solution is to make better use of the existing supply of cars. This is what many railroads are doing with the ADM Freight Liner method of upgrading boxcars.

One man can upgrade 15 cars a day into Class A condition using ADM Freight Liner 810—at any time—at any place on a railroad. The work does not have to be done in a car shop but can be performed at any convenient rip track or wash track.

Railroads hauling grain, flour, paper, tobacco, bauxite and many other commodities have found this plastic-and-fiberglass treatment a quick way to provide usable boxcars. Freight Liner seals rough and broken walls and corners with a smooth, tough surface that is moisture-proof and easy to clean. The Pure Food and Drug Administration approves ADM Freight Liner 810 for shipment and storage of bulk foodstuffs.

Let us show you how economically and quickly you can get more usable Class A cars. Write, wire or phone Archer-Daniels-Midland Company, 732 Investors Building, Minneapolis 2, Minn. (FEderal 3-2112).

Since January 1, 1956, 34 major railroads have upgraded more than 100,000 boxcars with

Freight Liner 810

Archer-Daniels-Midland

732 INVESTORS BUILDING,
MINNEAPOLIS 2, MINNESOTA

ADM PRODUCTS: Linseed, Soybean and Marine Oils, Synthetic and Natural Resins, Fatty Acids and Alcohols, Vinyl Plasticizers, Hydrogenated Glycerides, Sperm Oil, Foundry Binders, Bentonite, Industrial Cereal, Vegetable Proteins, Wheat Flour, Dehydrated Alfalfa, Livestock and Poultry Feeds.

MARKET OUTLOOK *at a glance*

Carloadings Drop 11.7% Below Previous Week's

Loadings of revenue freight in the week ended Sept. 12 totaled 480,647 cars, the Association of American Railroads announced on Sept. 17. This was a decrease of 63,442 cars, or 11.7%, compared with the previous week; a decrease of 185,576 cars, or 27.9%, compared with the corresponding week last year; and a decrease of 260,500 cars, or 35.1%, compared with the equivalent 1957 week.

Loadings of revenue freight for the week ended Sept. 5 totaled 544,089 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, Sept. 5

District	1959	1958	1957
Eastern	79,458	77,811	94,881
Allegheny	80,118	95,443	127,572
Pocahontas	46,317	45,612	54,535
Southern	112,658	98,788	107,354
Northwestern	62,954	92,124	106,757
Central Western	112,969	110,287	108,047
Southwestern	49,615	43,660	46,971
Total Western Districts	225,538	246,071	261,775
Total All Roads	544,089	563,725	646,117
Commodities:			
Grain and grain products	47,736	46,933	38,122
Livestock	6,250	6,630	7,467
Coal	100,927	98,250	119,229
Coke	3,213	6,440	9,711
Forest Products	41,101	34,777	34,220
Ore	9,380	50,839	81,925
Merchandise l.c.l.	42,655	44,527	47,306
Miscellaneous	292,827	275,329	308,137
Sept. 5	544,089	563,725	646,117
Aug. 29	548,820	646,226	745,620
Aug. 22	542,561	634,231	759,240
Aug. 15	543,844	626,314	750,640
Aug. 8	532,304	619,204	740,471
Cumulative total, 36 weeks	21,658,845	20,158,714	24,930,891

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended Sept. 5 totaled 8,626 cars, compared with 4,947 for the corresponding 1958 week. Loadings for 1959 up to Sept. 5 totaled 279,803 cars, compared with 176,291 for the corresponding period of 1958.

IN CANADA.—Carloadings for the ten-day period ended Aug. 31 totaled 104,871 cars, compared with 80,661 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
Aug. 31, 1959	104,871	35,206
Aug. 31, 1958	98,489	36,003
Cumulative Totals:		
Aug. 31, 1959	2,524,979	109,031
Aug. 31, 1958	2,483,498	110,236

Capital Expenditures

► *Increase of 37% Predicted.*—The Department of Commerce and the Securities and Exchange Commission now estimate that expenditures on new railroad plant and equipment will total $1.032 billion in 1959, an increase of 37% over 1958's $754 million. An earlier survey had put estimated expenditures at $867 million. The new survey noted that "the current anticipation includes a significant amount of leased equipment, which is being financed by private investors outside the railroad industry."

New Equipment

FREIGHT-TRAIN CARS

► *New Haven.*—Is acquiring 15 covered gondola cars from Bethlehem Steel Co. The 70-ton, 52½-ft cars are equipped with Standard Railway Equipment Manufacturing Co.'s 3-piece removable roofs and Evans DF loaders. Total cost: over $200,000. The cars are designed to carry strip and sheet brass.

► *Repair Ratio 0.1% Higher Than Last Year.*—Class I roads on Aug. 1 owned 1,700,917 freight cars, 43,542 less than a year ago, according to AAR report summarized below. Repair ratio was 0.1% higher than on Aug. 1, 1958.

	Aug. 1, 1959	Aug. 1, 1958	Change
Car Ownership	1,700,917	1,744,459	—43,542
Waiting repairs	138,440	140,286	— 1,846
Repair ratio	8.1%	8.0%	0.1%

Purchases & Inventories

► *Six Months' Purchases Up 24.2%.*—Purchases by domestic railroads of fuel, material and supplies in this year's first six months were $154,777,000, or 24.2%, higher than in the comparable 1958 period. Purchase and inventory estimates in following tables were prepared by Railway Age.

*PURCHASES**

	June 1959	Six Months 1959	Six Months 1958
	(000)	(000)	(000)
Rail	$ 10,786	$ 53,332	$ 26,287
Crossties	3,619	25,521	20,386
Other Material	95,949	524,633	404,801
Fuel	27,942	191,373	188,608
Total	$138,296	$794,859	$640,082

*Subject to revision.

*INVENTORIES***

	June 1, 1959	June 1, 1958
	(000)	(000)
Rail	$ 66,014	$ 59,716
Crossties	79,358	95,065
Other Material	413,813	468,946
Scrap	25,252	24,750
Fuel	20,807	20,174
Total	$605,244	$668,651

*Subject to revision.
†All total inventory figures taken from ICC statement M-125 for month indicated.

Quick delivery • quantity prices on small lots. Exclusive, construction features, now part of ACF Production Design Box Cars, mean lower maintenance costs and increased on-the-road service. ■ Combination threshold plate and side sill–door post reinforcement: strengthens critical area at wide door openings. ■ Outer edge of side sheet doubled: resists rivet–tear under impact. ■ Separate end sill construction: provides greater strength. ■ Diagonal panel roofs and Dreadnaught ends by Standard Railway Equipment Manufacturing Co.: standard equipment on ACF box cars. ■ Formed plate side sill reinforcement extends from bolster to bolster:

ACF PRODUCTION DESIGN BOX CARS WITH

combines with heavier side sill for extra strength. ACF Production Design Box Cars are available in 40′ and 50′ lengths. Price, design details and delivery dates are available from your nearest American Car and Foundry sales office. Don't miss our display of new cars with improved construction features at the outside track exhibit, Allied Railway Supply Exposition in Chicago, Sept. 20-23.

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IMPROVED CONSTRUCTION FEATURES

Sales Offices: New York, Chicago, Cleveland, Washington, D. C., Philadelphia, St. Louis, San Francisco

TRACK SHOW

(Continued from page 52)

Reynolds Metals—Track 9
- Baltimore & Ohio box car with aluminum innerliners.

Standard Car Truck Company—Track 2
- Semi-passenger double sprung type S2P truck with more than 500,000 miles' service with no maintenance.
- Barber stabilized type S2 truck equipped with Clevite bearings.
- Chesapeake & Ohio car equipped with tubular underframe.

Standard Railway Equipment Manufacturing Company—Track 5
- Great Northern box car incorporating Standard's diagonal roof panel, improved dreadnaught steel ends, floor protector plates, "Line-Rite" end and side linings, "ZU" side plates, improved coupler device, coupler positioning device with height adjustment and experimental plastic roof sheets.

Stran-Steel Corporation—Track 5
- Great Northern box car equipped with Stran-Steel anchor liner, nailable steel door posts and nailable steel flooring.

Thrall Car Manufacturing Company—Track 2
- Bulkhead flat car with reinforced underframe, built to specifications of Gypsum Manufacturers' Traffic Association.

Union Asbestos & Rubber Company—Track 5
- Pacific Fruit Express refrigerator car equipped with Equipco load dividers.

Union Tank Car Company—Track 2
- 20,000-gallon "HD" design tank car.

United States Rubber Company Track 2
- Car equipped with Dasey Air Dunnage System, a spring and air-dunnage device which uses U. S. Rubber's Shor-Kwik dunnage bags.

Westinghouse Air Brake Company—Track 2
- Wilson Car Lines refrigerator car equipped with Wabcopac brakes and Cobra shoes.

(Continued from page 16)
commodities at rates competitive with those of other common carriers.

Commissioner Freas spoke at Chicago before the National Association of Motor Bus Operators. He said the Commission is "deeply concerned" about some present trends in bus accidents. He added:

"There is altogether too great a number of accidents resulting from loss of control and from skidding of buses on wet and slippery pavement. It seems obvious that there is a lack of sensible regard for prudent speed practices in a large number of these cases. . . . We are concerned also with the number of accidents in which investigation showed the driver's background to be inconsistent with the responsibility of transporting passengers."

CIT&T Traffic Course Includes 27 Subjects

Twenty-seven subjects have been selected for inclusion in the basic traffic course to be offered by the recently organized Canadian Institute of Traffic and Transportation. Successful completion of this course will qualify a student for participation in the advanced course to be conducted by the institute.

The 27 basic subjects, as announced by V. M. Stechishin, manager of the Manitoba Transportation Commission and chairman of the institute's Educational Committee, are:

Introduction to Canadian freight rate structure.
Rules of transportation contained in the Canadian Freight Classification.
Classification and ratings.
Railway bills of lading.
Class rates and tariffs.
Commodity and competitive rates and tariffs.
Export, import and international rates.
Agreed charges.
Small shipments—freight forwarders and parcel post.
Small shipments—express.
Motor freight transportation.
Inland and coastal water transportation.
Air express and air cargo.
Terminal facilities and switching.
Demurrage and weighing.
Transit privileges.
Special services.
Routing, diverting, tracing and expediting.
Freight claims.
Warehousing and distribution.
Materials handling.
Passenger transportation.
Tariff construction.
Customs procedure.
Ocean bill of lading.
Ocean shipments.
Marine insurance.

You Ought To Know...

The Illinois Commerce Commission last week took testimony—pro and con—on the Chicago North Shore & Milwaukee petition for abandonment. CNS&M, subsidiary of Susquehanna Corporation, also has an abandonment action pending before the ICC (RA, June 30, 1958, p. 32).

American Express credit cards will be honored by the Milwaukee for passenger fares and services effective Oct. 1. Like Great Northern and Northern Pacific (which previously announced Amexco affiliation), Milwaukee will continue to honor Rail Travel Credit Agency cards.

Southern Pacific will be prepared in the event traffic increases make its Alfalfa (Adair) Yard at El Paso, Tex., inadequate. SP is acquiring property near Anapra, west of El Paso, for possible future construction of a new yard. If a new yard is built, much of the Alfalfa property would be made available for industrial development.

"Air space" inside New York City's Grand Central Terminal has been rented by a company that plans to suspend a shoe store from the ceiling. Enclosed in glass and cradled by steel girders, the store reportedly will be the first to utilize a revolutionary air-suspension technique devised by architect Jose Fernandez.

Railroad executive officers are showing a keen interest in the supply industry's exhibits in Chicago (products for the engineering department last week, for the mechanical department this week). Among the top level officers who toured the track and structures show: C&NW's Heineman and Fitzpatrick, Rock Island's Jenks, SP's Russell, Cotton Belt's McKenzie.

Pullman-Standard and Trailmobile Inc. are including a Travelift straddle carrier as part of a new PAT container system. The carrier will span a railroad car and a highway truck side by side. It's capable of transferring a 40-ft container in less than five minutes. A slight modification of the unit will permit side loading of standard trailers on piggyback flat cars. P-S and Trailmobile will handle the unit through a sales distributorship agreement with Travelift and Engineering Co., Inc., of Sturgeon Bay, Wisc.

Elaborate security requirements made the PRR's task in moving Soviet Premier Khrushchev from Washington to New York last week unusually complicated. Under the overall direction of the State Department, the Pennsy provided a 15-car stainless-steel train for the three hour and thirty-five minute trip. Included in the consist of coaches, diner, parlor cars, a press and an observation car were 10 cars for the 300-man press crew, five cars for the Russian party. On arrival in New York, the Khrushchev cars were spotted on a track adjacent to the baggage-room elevator, which permitted the Soviet party to board limousines directly from the baggage room, without going through Penn Station's crowds.

Up to $200 million credit has been arranged for Quebec Cartier Mining Co.'s extensive iron-ore project in Quebec's St. Lawrence River north shore area. The U. S. Steel subsidiary will use the funds to complete the development by late 1960 or early 1961. A major part of the project (RA, March 9, p. 44) is a 193-mile railroad from the mine at Lac Jeannine to Port Cartier on the St. Lawrence. About 80 miles of the railroad have been completed.

Passenger injuries per million riders on New York City's subway system fell to 9.2 in 1958, the New York City Authority reports. By contrast, there were 10.6 injuries per million passengers in 1953. Significantly enough, the subway has achieved its enviable safety record with only one man in the cab of its multiple-unit trains.

A 24-inch coal pipeline linking the West Virginia coal fields with four big eastern utility companies is under discussion. The utilities are Consolidated Edison of New York, Public Service Electric and Gas of New Jersey, Pennsylvania Power and Light, and Philadelphia Electric. Consolidation Coal Co. of Pittsburgh and Texas Eastern Transmission Corp. are reportedly behind the project. Consolidation Coal now operates a 135-mile coal pipeline from Cadiz, Ohio, to the Cleveland Electric Illuminating Co.'s Eastlake plant (RA, Oct. 6, 1958, p. 20).

Railroad employment in mid-August stood at 819,626—2.91% below August 1958 and 3.14% below July 1959—according to the ICC's Bureau of Transport Economics and Statistics.

The railroads, already supporting community governmental services via stiff tax payments, are also doing their share (and more) to support community charitable services. First railroad contributions to the current Community Fund-Red Cross Crusade of Mercy in Chicago came from the Santa Fe foundation and Illinois Central—contributions 25% and 22% greater, respectively, than the companies made last year.

Government guaranty of a $1,500,000 loan to the New Haven has been finally approved by the ICC. The loan will be obtained from the Second National Bank of New Haven, and proceeds used to finance the construction of shop facilities. The approval came in a report in which the Commission also gave further consideration to other pending New Haven applications. One of these seeks a guaranteed loan to finance locomotives. As to that, the Commission modified its prior findings to embrace the financing of 30 new diesels in lieu of 30 previously delivered in the amount of $8,159,400, but deferred action pending receipt of additional information to complete the application. The ICC also wants more information on an application for guaranty of a $500,000 loan to finance the acquisition of maintenance of way equipment and machinery.

Advertisers' Index

CLASSIFIED ADVERTISEMENTS

Maintenance Must Be Stabilized

Throughout this issue the outlook predictions are necessarily tempered by the effects of the longest steel strike in history. There is no uncertainty, however, about the fact that many roads curtailed programs over two months ago when the strike first started, and before anybody knew it would be a long one. The steel strike focuses attention on the feast-or-famine character of railroad maintenance programs.

This on-again, off-again character of most railroads' maintenance programs is certainly not new. But that is no reason to dismiss it as being impossible of solution. For decades there was practically no progress in dealing with the perennial hot box problem—yet great strides toward "licking" this costly situation have been made in the past few years. And there is evidence that a start is being made in stabilizing maintenance work.

•

Good performance requires adherence to good plans. This holds true for yearly maintenance programs just as it does for a shop facility, or a new locomotive, or a new piece of rolling stock. No mechanical department officer would long hold his job if he did not put a lot of intelligent thought into the layout, equipping and building of (say) a new diesel shop. But this same officer is asked all too frequently to alter his maintenance plans every time traffic recessions hit the rails, no matter how temporary they may be.

It should be recognized that the purpose of a maintenance program is to maintain equipment economically. This goal should not be subordinated to the secondary objective of giving the appearance of stable earnings.

This side of the picture is represented by the comments which a chief mechanical officer made late last June when asked about his problems. He replied, "My biggest headache is the possibility of a steel strike." Why? Because he had in his pocket a list of the maintenance operations and repair programs that would either be curtailed or stopped the minute a steel strike became effective. It was a sizeable list.

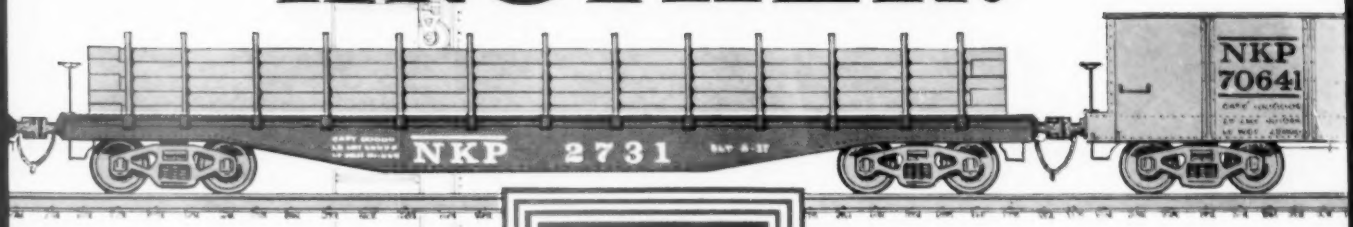
In the same month a top mechanical officer of another road, while discussing his road's car building program, was asked what effect the impending steel strike would have on the completion of the program. The answer was "There will be no change in our plans. We have the materials and we have budgeted for the program." It is the existence of this attitude on the part of a few roads that gives cause for optimism. And this side of the picture is made all the brighter because both roads were making comparable earnings. The steel strike would have substantially the same effect on the incomes of both.

Perhaps no better appraisal of the problem has been made than the one presented six years ago at Atlantic City when the last track exhibit of locomotive and car equipment was held. In the address before the AAR Mechanical and Purchases and Stores Divisions, William White, now D&H, then NYC president, said, "There is great opportunity to increase efficiency by better budgeting and programming of maintenance work. Some railroads are still trying to cut the cloth of their maintenance expenditures on a month-to-month basis, changing their programs many times a year to match fluctuations in revenue or estimated revenue."

Now is an appropriate time to review Mr. White's observations. This week at Chicago the railroads' mechanical maintenance officers are meeting with an opportunity to see the first track exhibit since 1953, along with a fine indoor exhibit. Here they will be viewing much of the equipment and materials they need to provide tomorrow's more dependable and economical motive power and rolling stock. It is equipment they know they should be using in maintenance and building programs today in order to meet adequately the traffic demands of tomorrow's strike-free economy. They know that "crash" programs cannot possibly replace well-planned and stabilized maintenance and repair operations.

THE OUTLOOK: Stability of maintenance programs is a primary goal of not only the mechanical departments but of the maintenance of way and signal departments as well. Long range maintenance requirements cannot be fulfilled economically by periodically juggling the work to meet the short range objective of "matching fluctuations in revenue or estimated revenue." There is a selling job to be done here, and the responsibility for it rests with the maintenance officers and suppliers who know the facts.

STILL ANOTHER!



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high impact strength
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The Nickel Plate Road is now using pressure-treated decking for open top and flat cars because constant exposure to weather was conducive to decay and early failure of untreated decking. Pressure-treated decking will not decay and has great ability to take the beating of all types of loading and lading. Because it lasts longer, maintenance costs are reduced and in-service revenue increased. If you would like more information about the substantial savings possible through the use of treated car decking, consult your Koppers representative or write direct.

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Syncrostep® is a two-wire coding system for the remote control and consolidation of interlockings. Simple and durable, Syncrostep requires a minimum of equipment. At the same time, Syncrostep provides fast, reliable transmission of controls and indications over two line wires of any type, over any distance.

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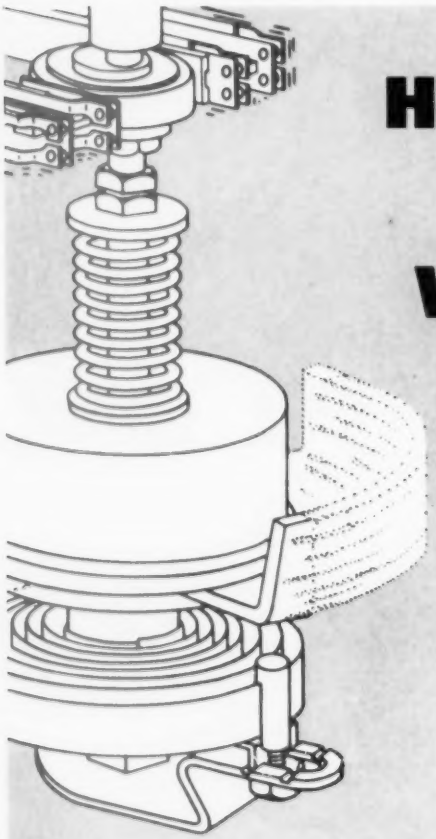
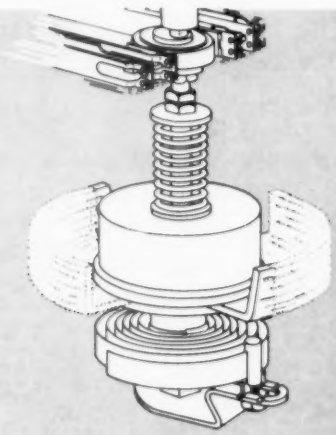


HOW IT WORKS



In remote control systems, coding equipment at the office and in the field must operate together, step by step, during each code cycle. Some methods of maintaining this coordination are quite complicated, expensive, and slow. Syncrostep simplicity and speed result from an exclusive code stepping system developed in GRS.

A mechanical oscillator—simple in design, but precise in operation—is located at the office. There is another in the field. These are normally held locked under tension. When the code cycle starts, the two oscillators are released simultaneously and swing independently, but in unison, on their own inertia. This keeps the two ends in step while the code is sent. Then the oscillators are locked up again, ready for the next cycle.